



# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

(Sponsored by TKR Educational Society, Approved by AICTE, Affiliated to JNTUH)

AN AUTONOMOUS INSTITUTION

Accredited by NBA and NAAC with 'A' Grade

Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/10

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design and Fabrication of Chassis for Electric Vehicle & Power Transmission System for Electric Vehicle**” under the guidance of Mr. A.Kiran Kumar, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and Fabrication of Chassis for Electric Vehicle & Power Transmission System for Electric Vehicle” is hereby accorded under the seed fund support project for a total cost of Rs. 1,60,000/- (One lakh Sixty Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Fabrication	1	1,20,000
2	Motor	1	15,000
3	Battery	2	10,000
4	on board charger	1	7,000
5	Power control unit	1	8,000
<b>TOTAL</b>			<b>1,60,000/-</b>

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Medbowli, Meerpet, Hyderabad- 500097



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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. A.Kiran Kumar
2.	Title of the Project:	Design and Fabrication of Chassis for Electric Vehicle & Power Transmission System for Electric Vehicle
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	1,60,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/10	30-08-2021	1,60,000/-	1,60,000/-	112000/-	48000/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 48000/-

(ii) Balance (Carried forward to next financial year) if applicable: 48000/-




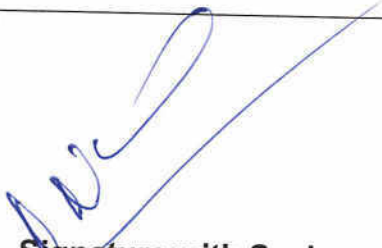
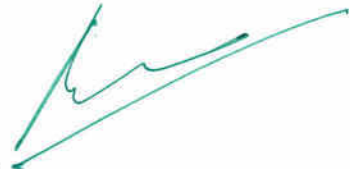
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It is certified that Mr. A.Kiran Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> _____ TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad-500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad-500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr. A.Kiran Kumar
2.	Title of the Project:	Design and Fabrication of Chassis for Electric Vehicle & Power Transmission System for Electric Vehicle
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	48000/-
	(ii) Others, If any	NIL
	(iii) Total	48000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
48000/-	TKRCET/Principal/R&D/seedfund/2021/10	30-08-2021	1,60,000/-	48000/-	48000/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





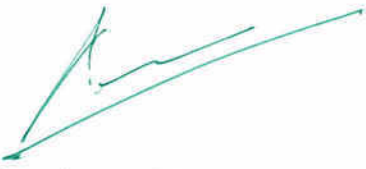
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It is certified that Mr. A.Kiran Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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College Code: K9

TKRCET/Principal/R&D/seedfund/2021/11

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Local Dynamic Neighbourhood Based Outlier Detection Approach and Its Framework for Large-Scale Datasets**” under the guidance of Dr A Suresh Rao, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Local Dynamic Neighbourhood Based Outlier Detection Approach and Its Framework for Large-Scale Datasets” is hereby accorded under the seed fund support project for a total cost of Rs. 61,000/- (Sixty One Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Collecting the data from various locations	11067
2	Field work	9968
3	TA & DA for Attending Conference	15000
4	TA & DA for Attending workshop	5000
5	Contingency	9976
6	Others	9989
<b>TOTAL</b>		<b>61000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr A Suresh Rao
2.	Title of the Project:	Local Dynamic Neighbourhood Based Outlier Detection Approach and Its Framework for Large-Scale Datasets
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	61,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/11	30-08-2021	61,000/-	61,000/-	42700/-	18300/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 18300/-

(ii) Balance (Carried forward to next financial year) if applicable: 18300/-




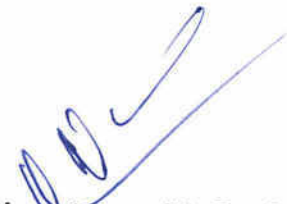

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It is certified that Dr A Suresh Rao satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal Finance officer</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr A Suresh Rao
2.	Title of the Project:	Local Dynamic Neighbourhood Based Outlier Detection Approach and Its Framework for Large-Scale Datasets
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	18300/-
	(ii) Others, If any	NIL
	(iii) Total	18300/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
18300/-	TKRCET/Principal/R&D/seedfund/2021/11	30-08-2021	61,000/-	18300/-	18300/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



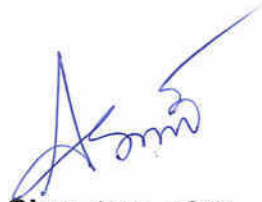
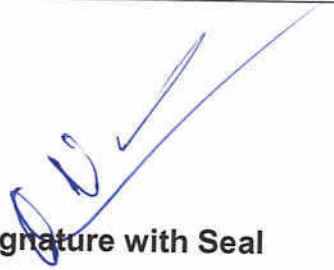

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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College Code: K9

TKRCET/Principal/R&D/seedfund/2021/12

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Feature Selection for Intrusion Detection System in Internet-Of-Things**” under the guidance of Dr Ch B N Lakshmi, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Feature Selection for Intrusion Detection System in Internet-Of-Things” is hereby accorded under the seed fund support project for a total cost of Rs. 45,000/- (Forty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Sensors(5)	30270
2	Actuators	2500
3	Raspberri-Pi	6000
4	TA & DA for Attending workshop	4500
5	Others	1730
<b>TOTAL</b>		<b>45000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr Ch B N Lakshmi
2.	Title of the Project:	Feature Selection for Intrusion Detection System in Internet-Of-Things
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	45,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/12	30-08-2021	45,000/-	45,000/-	31500/-	13500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 13500/-

(ii) Balance (Carried forward to next financial year) if applicable: 13500/-






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It is certified that Dr Ch B N Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr Ch B N Lakshmi
2.	Title of the Project:	Feature Selection for Intrusion Detection System in Internet-Of-Things
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	13500/-
	(ii) Others, If any	NIL
	(iii) Total	13500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13500/-	TKRCET/Principal/R&D/seedfund/2021/12	30-08-2021	45,000/-	13500/-	13500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



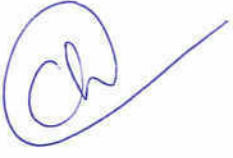


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It is certified that Dr Ch B N Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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College Code: K9

TKRCET/Principal/R&D/seedfund/2021/13

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Recommendation Model in social media Based on Deep Emotion Analysis and Multi-Source View Fusion**” under the guidance of Dr KSR Radhika, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Recommendation Model in social media Based on Deep Emotion Analysis and Multi-Source View Fusion” is hereby accorded under the seed fund support project for a total cost of Rs. 51,000/- (Fifty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Collecting the User Reviews Data from various Sources with different factors	10000
2	Purchasing network metadata	10000
3	TA & DA for Attending Conference	15000
4	TA & DA for Attending workshop	8000
5	Contingency	5000
6	Others	3000
<b>TOTAL</b>		<b>51000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr KSR Radhika
2.	Title of the Project:	Recommendation Model in social media Based on Deep Emotion Analysis and Multi-Source View Fusion
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	51,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/13	30-08-2021	51,000/-	51,000/-	35700/-	15300/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15300/-

(ii) Balance (Carried forward to next financial year) if applicable: 15300/-






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It is certified that Dr KSR Radhika satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr KSR Radhika
2.	Title of the Project:	Recommendation Model in social media Based on Deep Emotion Analysis and Multi-Source View Fusion
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	15300/-
	(ii) Others, If any	NIL
	(iii) Total	15300/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15300/-	TKRCET/Principal/R&D/seedfund/2021/13	30-08-2021	51,000/-	15300/-	15300/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr KSR Radhika satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/14

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Cost Effective Energy Efficient and Secure Routing Protocol (CESR) For WBAN” under the guidance of Dr. B Veeramallu, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Cost Effective Energy Efficient and Secure Routing Protocol (CESR) For WBAN” is hereby accorded under the seed fund support project for a total cost of Rs. 51,500/- (Fifty One Thousand Five Hundred). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Seame Motion Sensor (5)	30270
2	Collecting MIMIC-III Data	7000
3	TA & DA for Attending Conference	10000
4	TA & DA for Attending workshop	2000
5	Others	2230
<b>TOTAL</b>		<b>51500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. B Veeramallu
2.	Title of the Project:	Cost Effective Energy Efficient and Secure Routing Protocol (CESR) For WBAN
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	51,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/14	30-08-2021	51,500/-	51,500/-	36050/-	15450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15450/-

(ii) Balance (Carried forward to next financial year) if applicable: 115450/-






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It is certified that Dr. B Veeramallu satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. B Veeramallu
2.	Title of the Project:	Cost Effective Energy Efficient and Secure Routing Protocol (CESR) For WBAN
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	15450/-
	(ii) Others, If any	NIL
	(iii) Total	15450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15450/-	TKRCET/Principal/R&D/seedfund/2021/14	30-08-2021	15450/-	15450/-	15450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL








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It is certified that Dr. B Veeramallu satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/15

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Error Minimization in Localization of Wireless Sensor Networks Using Fish Swarm Optimization Algorithm**” under the guidance of Dr. B. Veeramallu, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Error Minimization in Localization of Wireless Sensor Networks Using Fish Swarm Optimization Algorithm” is hereby accorded under the seed fund support project for a total cost of Rs. 45,000/- (Forty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	GlomoSim Tool Tenancy	10000
2	Sensors(3)	18162
3	Mobile Anchors	6500
4	TA & DA for Attending workshop	5000
5	Contingency	4000
6	Others	1338
<b>TOTAL</b>		<b>45000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. B. Veeramallu
2.	Title of the Project:	Error Minimization in Localization of Wireless Sensor Networks Using Fish Swarm Optimization Algorithm
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	45,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/15	30-08-2021	45,000/-	45,000/-	31500/-	13500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 13500/-

(ii) Balance (Carried forward to next financial year) if applicable: 13500/-



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It is certified that Dr. B. Veeramallu satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. B. Veeramallu
2.	Title of the Project:	Error Minimization in Localization of Wireless Sensor Networks Using Fish Swarm Optimization Algorithm
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	13500/-
	(ii) Others, If any	NIL
	(iii) Total	13500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13500/-	TKRCET/Principal/R&D/seedfund/2021/15	30-08-2021	45,000/-	13500/-	13500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Meadow, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Meadow, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/16

Dt. 30-08-2021


## SANCTION ORDER

Subject: Seed fund support for the research project titled “Agricultural Aid for Tomato Harvesting (AAT)” under the guidance of Dr. M. Girish Kumar, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Agricultural Aid for Tomato Harvesting (AAT)” is hereby accorded under the seed fund support project for a total cost of Rs. 67,000/- (Sixty Seven Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Raspberry Pi 4 (4 or 8Gb RAM) Board	3	36200
2	MG996R Servo Motors	5	4500
3	MG90S Servo Motors	4	5400
4	DC Motors (1000 RPM)	4	3600
5	Wheels	4	2000
6	Metal Belt for Wheels	2	1200
7	L298n Motor Driver	2	1600
8	Robotic Hand Design (3D Printed)	1	6000
9	Web Camera	1	2000
10	12V DC Battery	1	1100
11	12V to 5V Converter	1	800
12	Robot Frame	1	2600
<b>TOTAL</b>			<b>67000</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. M. Girish Kumar
2.	Title of the Project:	Agricultural Aid for Tomato Harvesting (AAT)
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	67,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/16	30-08-2021	67,000/-	67,000/-	46900/-	20100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 20100/-

(ii) Balance (Carried forward to next financial year) if applicable: 20100/-








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It is certified that Dr. M. Girish Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. M. Girish Kumar
2.	Title of the Project:	Bamboo Reinforced Concrete: Experimental Investigation on Manga & Dagdi Bamboo
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	20100/-
	(ii) Others, If any	NIL
	(iii) Total	20100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
20100/-	TKRCET/Principal/R&D/seedfund/2021/16	30-08-2021	67,000/-	20100/-	20100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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It is certified that Dr. M. Girish Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer Name: _____ TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Principal Name: _____ TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/17

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Better And Faster Emergency Care During Accident and Vehicle Impact” under the guidance of Dr. M. Mahesh, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Better And Faster Emergency Care During Accident and Vehicle Impact” is hereby accorded under the seed fund support project for a total cost of Rs. 52,000/- (Fifty Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Arduino Uno Board	3	3600
2	GPS Modules	2	2400
3	GSM module	2	3500
4	Pressor sensors	6	8500
5	Tilt sensors	4	4200
6	Accelerometer	2	1200
7	LCD Display	2	1200
8	Temperature sensors	4	12500
9	IR sensors	8	4500
10	Ultra sonic sensors	8	4000
11	Strain gauge sensors	2	3000
12	12V DC Battery	1	1000
11	12V to 5V Converter	1	900
12	Connecting Wires and Miscellaneous		1500
<b>TOTAL</b>			<b>52000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. M. Mahesh
2.	Title of the Project:	Better And Faster Emergency Care During Accident and Vehicle Impact
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	52,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/17	30-08-2021	52,000/-	52,000/-	36400/-	15600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15600/-

(ii) Balance (Carried forward to next financial year) if applicable: 15600/-





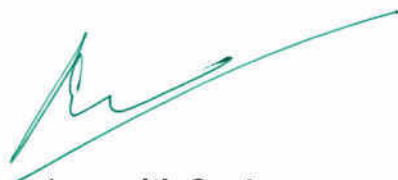
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
(AUTONOMOUS)**

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It is certified that Dr. M. Mahesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. M. Mahesh
2.	Title of the Project:	Better And Faster Emergency Care During Accident and Vehicle Impact
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	15600/-
	(ii) Others, If any	NIL
	(iii) Total	15600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15600/-	TKRCET/Principal/R&D/seedfund/2021/17	30-08-2021	52,000/-	15600/-	15600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr. M. Mahesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/18

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Energy-Efficient Mobile Data Collection Adopting Node Cooperation in An Underwater Acoustic Sensor Network” under the guidance of Dr. Vicky Nair, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Energy-Efficient Mobile Data Collection Adopting Node Cooperation in An Underwater Acoustic Sensor Network” is hereby accorded under the seed fund support project for a total cost of Rs. 47,000/- (Thirty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Sensors(3)	18162
2	LASER Generator	4000
3	TA & DA for Attending Conference	13000
4	TA & DA for Attending workshop	5000
5	Contingency	3500
6	Others	1338
<b>TOTAL</b>		<b>45000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. Vicky Nair
2.	Title of the Project:	Energy-Efficient Mobile Data Collection Adopting Node Cooperation in An Underwater Acoustic Sensor Network
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	47,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/18	30-08-2021	47,000/-	47,000/-	32900/-	14100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14100/-

(ii) Balance (Carried forward to next financial year) if applicable: 14100/-






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It is certified that Dr. Vicky Nair satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> <b>Chief Finance Officer (Head of Finance)</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> <b>Head of Organisation</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. Vicky Nair
2.	Title of the Project:	Energy-Efficient Mobile Data Collection Adopting Node Cooperation in An Underwater Acoustic Sensor Network
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	14100/-
	(ii) Others, If any	NIL
	(iii) Total	14100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14100/-	TKRCET/Principal/R&D/seedfund/2021/18	30-08-2021	47,000/-	14100/-	14100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/19

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Confidence Estimation for Attention-Based Sequence-To-Sequence Models for Speech Recognition**” under the guidance of Dr.A. Pramod Reddy, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Confidence Estimation for Attention-Based Sequence-To-Sequence Models for Speech Recognition” is hereby accorded under the seed fund support project for a total cost of Rs. 59,000/- (Fifty Nine Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Ahuja Mike AWM-520VHL (2)	18000
2	Bio-Sensors CSD-200 (8)	21600
3	Field work	10000
4	TA & DA for Attending workshop	4000
5	Contingency	3500
6	Others	1900
<b>TOTAL</b>		<b>59000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr.A. Pramod Reddy
2.	Title of the Project:	Confidence Estimation for Attention-Based Sequence-To-Sequence Models for Speech Recognition
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	59,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/19	30-08-2021	59,000/-	59,000/-	41,300/-	17700/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 17700/-

(ii) Balance (Carried forward to next financial year) if applicable: 17700/-






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It is certified that Dr.A. Pramod Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr.A. Pramod Reddy
2.	Title of the Project:	Confidence Estimation for Attention-Based Sequence-To-Sequence Models for Speech Recognition
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	17700/-
	(ii) Others, If any	NIL
	(iii) Total	17700/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17700/-	TKRCET/Principal/R&D/seedfund/2021/19	30-08-2021	59,000/-	17700/-	17700/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad - 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/20

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design and Development of SrM motor**” under the guidance of Dr. D. V. Ravi Shankar, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and Development of SrM motor” is hereby accorded under the seed fund support project for a total cost of Rs. 77,500/- (Seventy Seven Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	CAD software	1	15000
2	Dynamo meter	1	10000
3	Power Analyser	1	40000
4	FEA software	1	12500
<b>TOTAL</b>			<b>77500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. D. V. Ravi Shankar
2.	Title of the Project:	Design and Development of SrM motor
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	77,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/20	30-08-2021	77,500/-	77,500/-	54520/-	23250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 23250/-

(ii) Balance (Carried forward to next financial year) if applicable: 23250/-






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It is certified that Dr. D. V. Ravi Shankar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. D. V. Ravi Shankar
2.	Title of the Project:	Design and Development of SrM motor
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	23250/-
	(ii) Others, If any	NIL
	(iii) Total	23250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
23250/-	TKRCET/Principal/R&D/seedfund/2021/20	30-08-2021	77,500/-	23250/-	23250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




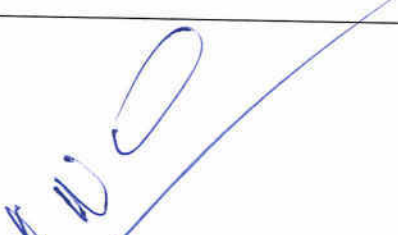

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/21

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “A Clustered Based Approach for Energy Efficient Routing in WSNs” under the guidance of Dr. M. Narender, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “A Clustered Based Approach for Energy Efficient Routing in WSNs” is hereby accorded under the seed fund support project for a total cost of Rs. 65,000/- (Sixty Five Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	MAT LAB(Math Works)	20000
2	Purchase API	5000
3	TA & DA for Attending Conference	15000
4	TA & DA for Attending workshop	5000
5	Contingency	15000
6	Others	5000
<b>TOTAL</b>		<b>65000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr. M. Narender
2.	Title of the Project:	A Clustered Based Approach for Energy Efficient Routing in WSNs
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	19500/-
	(ii) Others, If any	NIL
	(iii) Total	19500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
19500/-	TKRCET/Principal/R&D/seedfund/2021/21	30-08-2021	65,000/-	19500/-	19500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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It is certified that Dr. M. Narender satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. M. Narender
2.	Title of the Project:	A Clustered Based Approach for Energy Efficient Routing in WSNs
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	65,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/21	30-08-2021	65,000/-	65,000/-	45500/-	19500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 19500/-

(ii) Balance (Carried forward to next financial year) if applicable: 19500/-



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/22

Dt. 30-08-2021

## SANCTION ORDER


Subject: Seed fund support for the research project titled “Missing child identification using face recognition with CNN algorithm” under the guidance of Mr. J. Ramesh, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Missing child identification using face recognition with CNN algorithm” is hereby accorded under the seed fund support project for a total cost of Rs. 61,000/- (Sixty One Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camera (HD)	1	27000
2	AMD HP Quadra P400 Graphics Card Graphic Cards 1ME43AT (To speed up the recognition process)	1	28000
3	WD 240 GB SSD	1	6000
4	Open CV (to detect and recognize faces in images or videos)	1	0
TOTAL			61000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr. J. Ramesh
2.	Title of the Project:	Missing child identification using face recognition with CNN algorithm
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	18300/-
	(ii) Others, If any	NIL
	(iii) Total	18300/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
18300/-	TKRCET/Principal/R&D/seedfund/2021/22	30-08-2021	61,000/-	18300/-	18300/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. J. Ramesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpeta, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpeta, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. J. Ramesh
2.	Title of the Project:	Missing child identification using face recognition with CNN algorithm
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	61,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/22	30-08-2021	61,000/-	61,000/-	42700/-	18300/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 18300/-

(ii) Balance (Carried forward to next financial year) if applicable: 18300/-








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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Meddowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Meddowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/23

Dt. 30-08-2021

## SANCTION ORDER


Subject: Seed fund support for the research project titled “Peltier Thermo Electric Generator Based Standalone Micro Power Supply System” under the guidance of Mr S. Manohar Reddy, Department of Electrical and Electronics Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Peltier Thermo Electric Generator Based Standalone Micro Power Supply System” is hereby accorded under the seed fund support project for a total cost of Rs. 41,500/- (Forty One Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Peltier module	4	6100
2	Heat sink	8	5600
3	Cold sink	8	12000
4	Power management module	4	2800
5	Energy storage module	7	10500
6	Enclosure and wiring	3	4500
		-	
<b>TOTAL</b>			<b>41500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr S. Manohar Reddy
2.	Title of the Project:	Peltier Thermo Electric Generator Based Standalone Micro Power Supply System
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	41,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/23	30-08-2021	41,500/-	41,500/-	29050/-	12450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 12450/-

(ii) Balance (Carried forward to next financial year) if applicable: 12450/-





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It is certified that Mr S. Manohar Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr S. Manohar Reddy
2.	Title of the Project:	Peltier Thermo Electric Generator Based Standalone Micro Power Supply System
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	12450/-
	(ii) Others, If any	NIL
	(iii) Total	12450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12450/-	TKRCET/Principal/R&D/seedfund/2021/23	30-08-2021	41,500/-	12450/-	12450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




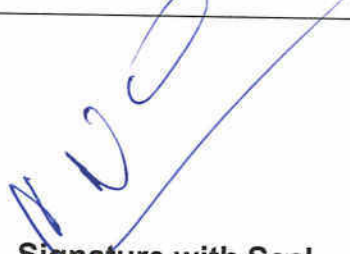

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/24

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Smart Garbage Segregation and Management System Using IOT” under the guidance of Mr. Balakrishna, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Smart Garbage Segregation and Management System Using IOT” is hereby accorded under the seed fund support project for a total cost of Rs. 55,500/- (Thirty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Node MCU	3	15000
2	Servo Motor	4	8000
3	ICs & IC Sockets	4	8000
4	Dry wet sensor	3	4000
5	Buzzer	4	5000
6	PCB	2	3500
7	Arduino Uno	2	8000
8	MQ sensor	3	3000
9	Metal Detector	2	3000
TOTAL			56500

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. Balakrishna
2.	Title of the Project:	Smart Garbage Segregation and Management System Using IOT
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	55,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/24	30-08-2021	55,500/-	55,500/-	38850/-	16650/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 16650/-

(ii) Balance (Carried forward to next financial year) if applicable: 16650/-





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It is certified that Mr. Balakrishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpel, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr. Balakrishna
2.	Title of the Project:	Smart Garbage Segregation and Management System Using IOT
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	16650/-
	(ii) Others, If any	NIL
	(iii) Total	16650/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
16650/-	TKRCET/Principal/R&D/seedfund/2021/24	30-08-2021	55,500/-	16650/-	16650/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





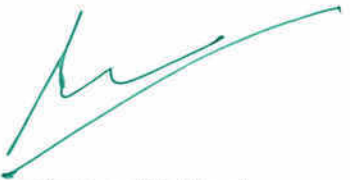
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/25

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Recycled Aggregate Concrete” under the guidance of Mr. Mohammed Buhran, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Recycled Aggregate Concrete” is hereby accorded under the seed fund support project for a total cost of Rs. 35,000/- (Thirty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Cement & Admixtures	7600/-
2	Aggregate (Fine & Coarse)	9900/-
3	Tools & Conveyance Charges	8800/-
4	Brick bat, Old concrete breaking	3200/-
5	Lubrication oil for mould	1000/-
6	Testing & Misc. Charges	4500/-
<b>TOTAL</b>		<b>35000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. Mohammed Buhran
2.	Title of the Project:	Recycled Aggregate Concrete
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	35,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/25	30-08-2021	35,000/-	35,000/-	24500/-	10500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 10500/-

(ii) Balance (Carried forward to next financial year) if applicable: 10500/-



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It is certified that Mr. Mohammed Buhran satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medawli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medawli, Meerpet, Hyderabad- 500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr. Mohammed Buhran
2.	Title of the Project:	Recycled Aggregate Concrete
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	10500/-
	(ii) Others, If any	NIL
	(iii) Total	10500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10500/-	TKRCET/Principal/R&D/seedfund/2021/25	30-08-2021	35,000/-	10500/-	10500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



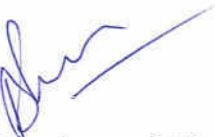


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It is certified that Mr. Mohammed Buhran satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Meebowlji, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Meebowlji, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/26

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Automatic Traffic Light System by using IR Sensor” under the guidance of Mr. V. Sai Vikas, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Automatic Traffic Light System by using IR Sensor” is hereby accorded under the seed fund support project for a total cost of Rs. 65,000/- (Thirty Five Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	IR Sensors & Controllers	9000/-
2	Microcontroller Board and pins	8000/-
3	Development Board	6500/-
4	Switch controls and materials for the board	9500/-
5	IR Sensors and switch controls (Addl.)	6500/-
6	Testing & Conveyance charges	8500/-
7	Arduino Microcontroller Boards and Sensors (Addl.)	9500/-
8	Fitting & Misc. Charges	7500/-
<b>TOTAL</b>		<b>65000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. V. Sai Vikas
2.	Title of the Project:	Automatic Traffic Light System by using IR Sensor
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	65,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/26	30-08-2021	65,000/-	65,000/-	45500/-	19500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 19500/-

(ii) Balance (Carried forward to next financial year) if applicable: 19500/-






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It is certified that Mr. V. Sai Vikas satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology . (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbayli, Meerast, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mr. V. Sai Vikas
2.	Title of the Project:	Automatic Traffic Light System by using IR Sensor
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	19500/-
	(ii) Others, If any	NIL
	(iii) Total	19500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
19500/-	TKRCET/Principal/R&D/seedfund/2021/26	30-08-2021	65,000/-	19500/-	19500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Mr. V. Sai Vikas satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/27

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled "A Machine Learning Approach for Predicting Chronic Kidney Disease" under the guidance of Mrs. C.Jaya Lakshmi, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled "A Machine Learning Approach for Predicting Chronic Kidney Disease" is hereby accorded under the seed fund support project for a total cost of Rs. 45,000/- (Forty Five Thousand). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	DIY Toxic chemical sensor	5	6500
2	Travel allowance to collect data from various sources	7 days	16500
3	Seagate Business Storage NAS (4 Bay) 12 TB Hard Disk	1	22000
TOTAL			45000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	A Machine Learning Approach for Predicting Chronic Kidney Disease
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	13500/-
	(ii) Others, If any	NIL
	(iii) Total	13500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13500/-	TKRCET/Principal/R&D/seedfund/2021/27	30-08-2021	45,000/-	13500/-	13500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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It is certified that Mrs. C.Jaya Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medawli, Meerpel, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medawli, Meerpel, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	A Machine Learning Approach for Predicting Chronic Kidney Disease
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	45,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/27	30-08-2021	45,000/-	45,000/-	31500/-	13500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 13500/-

(ii) Balance (Carried forward to next financial year) if applicable: 13500/-






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It is certified that Mrs. C.Jaya Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2021/28

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Obstacle Detection and Navigation for Blind using Smart Blind Stick” under the guidance of Ms. M. Chaitanya, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Obstacle Detection and Navigation for Blind using Smart Blind Stick” is hereby accorded under the seed fund support project for a total cost of Rs. 56,500/- (Fifty Six Thousand Five hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Raspberry Pi 4 (4 or 8Gb RAM) Board	2	24200
2	NODE MCU Board + LCD Display	4	12500
3	IR sensors	10	4500
3	Ultra sonic sensors	8	4000
3	GPS modules	4	6000
4	Stick Frame	2	800
5	12V DC Battery	1	2000
6	12V to 5V Converter	1	1300
7	Connecting Wires and Miscellaneous	-	1200
<b>TOTAL</b>			<b>56500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. M. Chaitanya
2.	Title of the Project:	Obstacle Detection and Navigation for Blind using Smart Blind Stick
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	56,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/28	30-08-2021	56,500/-	56,500/-	39550/-	16950/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 16950/-

(ii) Balance (Carried forward to next financial year) if applicable: 16950/-



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It is certified that Ms. M. Chaitanya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad - 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23  
as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Ms. M. Chaitanya
2.	Title of the Project:	Obstacle Detection and Navigation for Blind using Smart Blind Stick
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	16950/-
	(ii) Others, If any	NIL
	(iii) Total	16950/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
16950/-	TKRCET/Principal/R&D/seedfund/2021/28	30-08-2021	16950/-	16950/-	16950/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Ms. M. Chaitanya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2021/29

Dt. 30-08-2021

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Energy Efficient Teaching-Learning-Based Optimization for The Discrete Routing Problem in Wireless Sensor Networks” under the guidance of Dr.S.A.Kalaiselvan, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Energy Efficient Teaching-Learning-Based Optimization for The Discrete Routing Problem in Wireless Sensor Networks” is hereby accorded under the seed fund support project for a total cost of Rs. 48,000/- (Firty Eight Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Sensors(3)	18162
2	LASER Generator	4000
3	TA & DA for Attending Conference	13000
4	TA & DA for Attending workshop	5000
5	Contingency	3500
6	Others	1338
<b>TOTAL</b>		<b>45000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. S. A. Kalaiselvan
2.	Title of the Project:	Energy Efficient Teaching-Learning-Based Optimization for The Discrete Routing Problem in Wireless Sensor Networks
3.	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2021/29	30-08-2021	48,000/-	48,000/-	33600/-	14400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14400/-

(ii) Balance (Carried forward to next financial year) if applicable: 14400/-



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It is certified that Dr. S. A. Kalaiselvan satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2022-23**

**as on 31<sup>st</sup> March 2023**

1.	Name of the Principal Investigator:	Dr.S.A.Kalaiselvan
2.	Title of the Project:	Energy Efficient Teaching-Learning-Based Optimization for The Discrete Routing Problem in Wireless Sensor Networks
3	Grants position at the beginning of the Financial year	2021-22
	(i) Carry forward from previous financial year	14400/-
	(ii) Others, If any	NIL
	(iii) Total	14400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14400/-	TKRCET/Principal/R&D/seedfund/2021/29	30-08-2021	48,000/-	14400/-	14400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr. S. A. Kalaiselvan satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbown, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbown, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Accredited by NBA and NAAC with 'A' Grade

Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/04

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “A Multipurpose Agricultural Robot for Automatic Ploughing Seeding and Pesticides Spraying” under the guidance of Mr. A. Kiran Kumar, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “A Multipurpose Agricultural Robot for Automatic Ploughing Seeding and Pesticides Spraying” is hereby accorded under the seed fund support project for a total cost of Rs. 55,500/- (Fifty Five Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Frame	1	15,000
2	Seed box	1	2,000
3	Seed metering mechanism	1	5,000
4	drive transmission system	1	5,000
5	Furrow openers	1	4,000
6	Covering device	1	4,000
7	clutch	1	2,000
8	hitch frame	1	3,000
9	Transport wheels	1	4,500
10	Sprayer	1	6,000
11	Pesticide Tank	1	5,000
TOTAL			55,500

Principal

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TKR College of Engineering & Technology  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. A. Kiran Kumar
2.	Title of the Project:	A Multipurpose Agricultural Robot for Automatic Ploughing Seeding and Pesticides Spraying
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	55500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/04	18-09-2020	55,500/-	55500/-	38850/-	16650/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 16650/-

(ii) Balance (Carried forward to next financial year) if applicable: 16650/-






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It is certified that Mr. A. Kiran Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. A. Kiran Kumar
2.	Title of the Project:	A Multipurpose Agricultural Robot for Automatic Ploughing Seeding and Pesticides Spraying
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	16650
	(ii) Others, If any	NIL
	(iii) Total	16650/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
16650/-	TKRCET/Principal/R&D/seedfund/2020/04	18-09-2020	55,500/-	16650/-	16650/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL








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- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/05

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Design of IOT based Coal Mine Safety System using LORA” under the guidance of Ms. B. Manasa Reddy, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design of IOT based Coal Mine Safety System using LORA” is hereby accorded under the seed fund support project for a total cost of Rs. 48,000/- (Forty Eight Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Gas Sensor (MQ135)	2	20000
2	Fire Sensor	5	10000
3	Gas Sensor (MQ2)	4	1400
4	MQ2 GAS SENSOR	4	2000
5	DHT11 Sensor	4	500
6	Accelerometer	2	600
7	LCD Display	3	1000
8	IOT Module	3	2000
9	Zig Bee Tx	2	4000
10	Relay	4	2000
11	DC Fan	2	2000
12	Gear Motor (Fire)	2	1000
13	Power Supply	1	1500
TOTAL			48000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. B. Manasa Reddy
2.	Title of the Project:	Design of IOT based Coal Mine Safety System using LORA
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/05	18-09-2020	48,000/-	48,000/-	33600/-	14400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14400/-

(ii) Balance (Carried forward to next financial year) if applicable: 14400/-



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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. B. Manasa Reddy
2.	Title of the Project:	Design of IOT based Coal Mine Safety System using LORA
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14400/-
	(ii) Others, If any	NIL
	(iii) Total	14400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14400/-	TKRCET/Principal/R&D/seedfund/2020/05	18-09-2020	48,000/-	14400/-	14400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




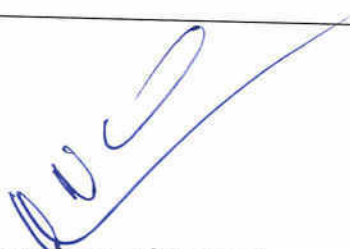

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Accredited by NBA & NAAC with 'A' Grade)



It is certified that Ms. B. Manasa Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Hyderabad- 500097	 <b>Signature with Seal</b> <b>Principal</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Hyderabad- 500097
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- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

<p><i>Manasa</i></p> <p><b>Signature of PI</b></p>	<p><i>[Signature]</i></p> <p><b>Signature with Seal</b></p> <p><b>Name:</b> Finance officer TKR College of Engineering &amp; Technology (AUTONOMOUS) Medbowli, Meerpeta, Hyderabad- 500097</p> <p><b>Chief Finance Officer (Head of Finance)</b></p>	<p><i>[Signature]</i></p> <p><b>Signature with Seal</b></p> <p><b>Name:</b> Principal TKR College of Engineering &amp; Technology (AUTONOMOUS) Medbowli, Meerpeta, Hyderabad- 500097</p> <p><b>Head of Organisation</b></p>
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/06

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Temperature & Mask Scan Entry System with Sanitization for Covid Prevention**” under the guidance of Dr. B. Swapna Rani, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Temperature & Mask Scan Entry System with Sanitization for Covid Prevention” is hereby accorded under the seed fund support project for a total cost of Rs. 57,500/- (Fifty Seven Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Raspberry Pi 4 (4 or 8Gb RAM) Board	2	24200
2	Arduino Uno Board	2	2400
3	Camera	2	3600
4	LCD Display	2	1200
5	Temperature sensors	4	12500
6	IR sensors	8	4500
7	Ultra sonic sensors	8	4000
8	Sanitization With spray Modules	2	2000
10	12V DC Battery	1	1000
11	12V to 5V Converter	1	600
12	Connecting Wires and Miscellaneous		1500
<b>TOTAL</b>			<b>57500</b>

Principal

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. B. Swapna Rani
2.	Title of the Project:	Temperature & Mask Scan Entry System with Sanitization for Covid Prevention
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	57,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/06	18-09-2020	57,500/-	57,500/-	40,250/-	17250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 17250/-

(ii) Balance (Carried forward to next financial year) if applicable: 17250/-






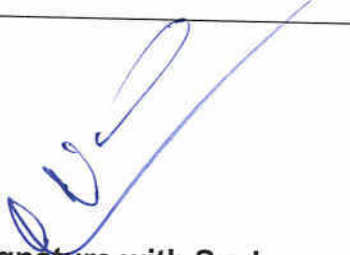

**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
(AUTONOMOUS)**

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It is certified that Dr. B. Swapna Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. B. Swapna Rani
2.	Title of the Project:	Temperature & Mask Scan Entry System with Sanitization for Covid Prevention
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	17250/-
	(ii) Others, If any	NIL
	(iii) Total	17250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17250/-	TKRCET/Principal/R&D/seedfund/2020/06	18-09-2020	57,500/-	17250/-	17250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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Accredited by NBA & NAAC with 'A' Grade)



It is certified that Dr. B. Swapna Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

Dt. 18-09-2020

TKRCET/Principal/R&D/seedfund/2020/07

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Influence of milling process parameters and significance of tools to improve the surface quality of GFRP composites**” under the guidance of Dr. Gopi Krishna, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Influence of milling process parameters and significance of tools to improve the surface quality of GFRP composites” is hereby accorded under the seed fund support project for a total cost of Rs. 1,90,000/- (One Lakh Ninety Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	milling dynamometer	1	70,000
2	milling tools	10	80,000
3	GFRP material	5	40,000
<b>TOTAL</b>			<b>1,90,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. Gopi Krishna
2.	Title of the Project:	Influence of milling process parameters and significance of tools to improve the surface quality of GFRP composites
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	1,90,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/07	18-09-2020	1,90,000/-	1,90,000	1,33,000/-	57000/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 57000/-

(ii) Balance (Carried forward to next financial year) if applicable: 57000/-



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It is certified that Dr. Gopi Krishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medhovi, Meerpeta, Hyderabad- 500097	 <b>Signature with Seal</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medhovi, Meerpeta, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. Gopi Krishna
2.	Title of the Project:	Influence of milling process parameters and significance of tools to improve the surface quality of GFRP composites
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	57000/-
	(ii) Others, If any	NIL
	(iii) Total	57000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
57000/-	TKRCET/Principal/R&D/seedfund/2020/07	18-09-2020	1,90,000/-	57000/-	57000/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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TKRCET/Principal/R&D/seedfund/2020/08

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Development of website/app for building customer relationship management in regional language**” under the guidance of Dr. Vicky Nair, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Development of website/app for building customer relationship management in regional language” is hereby accorded under the seed fund support project for a total cost of Rs. 48,000/- (Forty Eight Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Purchased for API	10000
2	Website Hoisting	10000
3	Collecting the data about customers	15000
4	TA & DA for Attending workshop	5000
5	Contingency	5000
<b>Total</b>		<b>48000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. Vicky Nair
2.	Title of the Project:	Development of website/app for building customer relationship management in regional language
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/08	18-09-2020	48,000/-	48,000/-	33600/-	14440/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14440/-

(ii) Balance (Carried forward to next financial year) if applicable: 14440/-



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It is certified that Dr. Vicky Nair satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Meddowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Meddowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. Vicky Nair
2.	Title of the Project:	Development of website/app for building customer relationship management in regional language
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14400/-
	(ii) Others, If any	NIL
	(iii) Total	14400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14440/-	TKRCET/Principal/R&D/seedfund/2020/08	18-09-2020	48,000/-	14440/-	14440/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



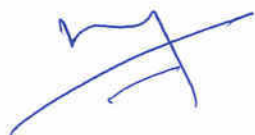
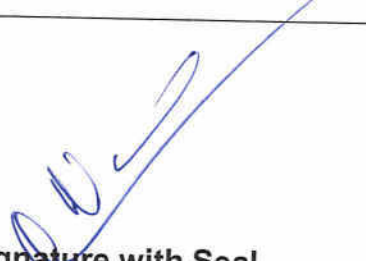

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medhovi, Meerpeta, Hyderabad- 500097	 <b>Signature with Seal</b> Principal Name: College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medhovi, Meerpeta, Hyderabad- 500097
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College Code: K9

TKRCET/Principal/R&D/seedfund/2020/09

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Power Generation of Vertical Axis Wind Turbine” under the guidance of Dr. S. Narsimha, Department of Electrical & Electronics Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Power Generation of Vertical Axis Wind Turbine” is hereby accorded under the seed fund support project for a total cost of Rs. 57,500/- (Fifty Seven Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Vertical axis wind turbine	1	15000
2	Generator	1	5500
3	Charge controller	3	6000
4	Battery	2	10000
5	Inverter	1	5000
6	Tower and mounting hardware	1	10000
7	Wiring and connectors	3	6000
TOTAL			57500

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. S. Narsimha
2.	Title of the Project:	Power Generation of Vertical Axis Wind Turbine
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	57500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/09	18-09-2020	57,500/-	57,500/-	40250/-	17250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 17250/-

(ii) Balance (Carried forward to next financial year) if applicable: 17250/-




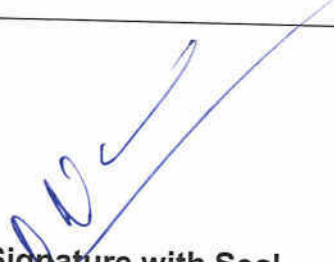

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It is certified that Dr. S. Narsimha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Dr. S. Narsimha
2.	Title of the Project:	Power Generation of Vertical Axis Wind Turbine
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	17250
	(ii) Others, If any	NIL
	(iii) Total	17250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17250/-	TKRCET/Principal/R&D/seedfund/2020/09	18-09-2020	57,500/-	17250/-	17250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.

The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

Dt. 18-09-2020

TKRCET/Principal/R&D/seedfund/2020/10

## SANCTION ORDER


Subject: Seed fund support for the research project titled “Fabrication and Mechanical performance of Aluminium(AA7075) Metal Matrix Composite with Multi welded carbon nanotube(MWCNT)” under the guidance of Ms. U. Nagamani, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Fabrication and Mechanical performance of Aluminium(AA7075) Metal Matrix Composite with Multi welded carbon nanotube(MWCNT)” is hereby accorded under the seed fund support project for a total cost of Rs. 72,500/- (Seventy Two Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Aluminium Alloy (AA) 7075	10kg	12,000
2	Carbon nano tubes	10gm	20,500
3	Preparation of samples	15	20,000
4	testing	15	20,000
TOTAL			72,500/-

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. U.Nagamani
2.	Title of the Project:	Fabrication and Mechanical performance of Aluminium(AA7075) Metal Matrix Composite with Multi welded carbon nanotube(MWCNT)
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	72,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/10	18-09-2020	72,500/-	72,500/-	50,750/-	21750/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 21750/-

(ii) Balance (Carried forward to next financial year) if applicable: 21750/-



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It is certified that Ms. U.Nagamani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. U.Nagamani
2.	Title of the Project:	Fabrication and Mechanical performance of Aluminium(AA7075) Metal Matrix Composite with Multi welded carbon nanotube(MWCNT)
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	21750/-
	(ii) Others, If any	NIL
	(iii) Total	21750/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
21750/-	TKRCET/Principal/R&D/seedfund/2020/10	18-09-2020	72,500/-	21750/-	21750/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




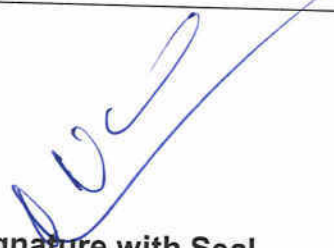

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It is certified that Ms. U.Nagamani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medhawal, Yeerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Principal</b> <b>Name: TKR College of Engineering &amp; Technology</b> (AUTONOMOUS) <b>Head of Organisation</b> Medhawal, Yeerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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AN AUTONOMOUS INSTITUTION

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2020/11

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Analysis on Medicines and Doctors availability in Government Hospital” under the guidance of Mr. M. Bala Krishna, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Analysis on Medicines and Doctors availability in Government Hospital” is hereby accorded under the seed fund support project for a total cost of Rs. 51,500/- (Fifty One Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camara (HD)	1	23000
2	AMD HP Quadro P400 Graphics Card Graphic Cards 1ME43AT (To speed up the recognition process)	1	24500
3	WD 240 GB SSD	1	4000
4	Open CV (to detect and recognize faces in images or videos)	1	0
TOTAL			51500

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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. Bala Krishna
2.	Title of the Project:	Analysis on Medicines and Doctors availability in Government Hospital
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	51500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/11	18-09-2020	51500/-	51500/-	36050/-	15450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15450/-

(ii) Balance (Carried forward to next financial year) if applicable: 15450/-



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It is certified that Mr. M. Bala Krishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

<p><i>M. Bala Krishna</i> Signature of PI</p>	<p><i>[Signature]</i> Signature with Seal Name: Finance officer TKR College of Engineering &amp; Technology Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097</p>	<p><i>[Signature]</i> Signature with Seal Name: Principal TKR College of Engineering &amp; Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad- 500097</p>
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. M. Bala Krishna
2.	Title of the Project:	Analysis on Medicines and Doctors availability in Government Hospital
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	15450/-
	(ii) Others, If any	NIL
	(iii) Total	15450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15450/-	TKRCET/Principal/R&D/seedfund/2020/11	18-09-2020	51500/-	15450/-	15450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. M. Bala Krishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/12

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Crop Guidance and Farmers Friend(Succor)” under the guidance of Ms. M.Sushma, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Crop Guidance and Farmers Friend(Succor)” is hereby accorded under the seed fund support project for a total cost of Rs. 48,500/- (Forty Eight Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Remote sensing equipment	1	26000
2	Sensor ( Weather Monitoring)	1	16500
3	WD 240 GB SSD	1	6000
TOTAL			48500

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. M.Sushma
2.	Title of the Project:	<b>Crop Guidance and Farmers Friend(Succor)</b>
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/12	18-09-2020	48500/-	48500/-	33950/-	14550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14550/-

(ii) Balance (Carried forward to next financial year) if applicable: 14550/-



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It is certified that Ms. M.Sushma satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. M.Sushma
2.	Title of the Project:	<b>Crop Guidance and Farmers Friend(Succor)</b>
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14550/-
	(ii) Others, If any	NIL
	(iii) Total	14550/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14550/-	TKRCET/Principal/R&D/seedfund/2020/12	18-09-2020	48500/-	14550/-	14550/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbown, Meerpel, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbown, Meerpel, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/13

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “A mobile based inventory management system using QR code application” under the guidance of Mr. Jeralad prashath George, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “A mobile based inventory management system using QR code application” is hereby accorded under the seed fund support project for a total cost of Rs. 48,000/- (Forty Eight Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	QR code API for one year	12000
2	Website Hoisting	10000
3	Field work	9000
4	TA & DA for Attending Conference	12000
5	Others	5000
<b>Total</b>		<b>48000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. Jeralad prashath George
2.	Title of the Project:	A mobile based inventory management system using QR code application
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/13	18-09-2020	48,000/-	48,000/-	33600/-	14440/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14440/-

(ii) Balance (Carried forward to next financial year) if applicable: 14440/-



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It is certified that Mr. Jeralad prashath George satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medipally, Medipal, Hyderabad-500097	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medipally, Medipal, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. Jeralad prashath George
2.	Title of the Project:	A mobile based inventory management system using QR code application
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14400/-
	(ii) Others, If any	NIL
	(iii) Total	14400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years [figure as at Sl. No. 7(iii)]	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14440/-	TKRCET/Principal/R&D/seedfund/2020/13	18-09-2020	48,000/-	14440/-	14440/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




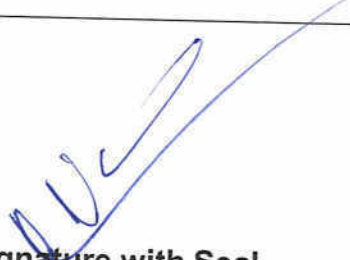

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It is certified that Mr. Jeralad prashath George satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medhowni, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medhowni, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/14

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “IOT based Smart Agriculture” under the guidance of Mr. M. Satyanarayana, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled IOT based Smart Agriculture” is hereby accorded under the seed fund support project for a total cost of Rs. 48,500/- (Forty Eight Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Raspberry Pi	2	26000
2	Phase indication system	1	5000
3	LM 35	5	1000
4	Humidity sensor	5	1000
5	Lcd	2	2000
6	motor	1	5000
7	relay	2	500
8	Moisture sensor	4	1000
9	GSM module	5	5000
10	Light sensors	1	1000
11	Temperature sensor	1	1000
<b>TOTAL</b>			<b>48500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. Satyanarayana
2.	Title of the Project:	IOT based Smart Agriculture
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/14	18-09-2020	48,500/-	48,500/-	33950/-	14550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14550/-

(ii) Balance (Carried forward to next financial year) if applicable: 14550/-





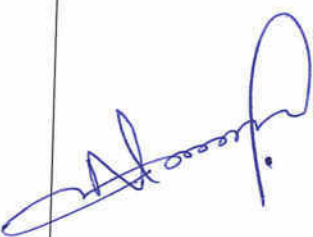


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It is certified that Mr. M. Satyanarayana satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. M. Satyanarayana
2.	Title of the Project:	IOT based Smart Agriculture
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14550/-
	(ii) Others, If any	NIL
	(iii) Total	14550/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14550/-	TKRCET/Principal/R&D/seedfund/2020/14	18-09-2020	48,500/-	14550/-	14550/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. M. Satyanarayana satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/15

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “An Analysis of Contribution of Digital payments in Social and Demographic Economic Developments of India, using Machine Learning Techniques” under the guidance of Mrs. G. Deepthi, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “An Analysis of Contribution of Digital payments in Social and Demographic Economic Developments of India, using Machine Learning Techniques” is hereby accorded under the seed fund support project for a total cost of Rs. 58,000/- (Fifty Eight Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	API for one year	10000
2	TA & DA for Attending Conference	15000
3	Field work	15000
4	TA & DA for Attending workshop	8000
5	Contingency	8000
Total		58000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mrs. G. Deepthi
2.	Title of the Project:	An Analysis of Contribution of Digital payments in Social and Demographic Economic Developments of India, using Machine Learning Techniques
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	58,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/15	18-09-2020	58,000/-	58,000/-	40600/-	17440/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 17440/-

(ii) Balance (Carried forward to next financial year) if applicable: 17440/-





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It is certified that Mrs. G. Deepthi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

<p><i>Deepthi</i> Signature of PI</p>	<p> Signature with Seal Name: Finance officer TKR College of Engineering &amp; Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097</p>	<p> Signature with Seal Name: Principal TKR College of Engineering &amp; Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad- 500097</p>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mrs. G. Deepthi
2.	Title of the Project:	An Analysis of Contribution of Digital payments in Social and Demographic Economic Developments of India, using Machine Learning Techniques
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	17400/-
	(ii) Others, If any	NIL
	(iii) Total	17400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17440/-	TKRCET/Principal/R&D/seedfund/2020/15	18-09-2020	58,000/-	17440/-	17440/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mrs. G. Deepthi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/16

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Partial replacement of fine aggregate with rubber tyre powder**” under the guidance of Mr. B. SHIVA PRASAD, Department of Civil Engineering, Meerpet, TKRCET, Hyderabad.

We are glad to inform you that the research project titled “Partial replacement of fine aggregate with rubber tyre powder” is hereby accorded under the seed fund support project for a total cost of Rs. 51,500/- (Fifty One Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Cement & Admixtures	9900/-
2	Rubber tyre & Powder preparation	7500/-
3	Aggregate (Fine & Coarse)	16800/-
4	Tools, Lubrication oil for moulds	8800/-
5	Material Conveyance, Testing & Misc. Charges	8500/-
<b>TOTAL</b>		<b>51500/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. B. SHIVA PRASAD
2.	Title of the Project:	Partial replacement of fine aggregate with rubber tyre powder
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	51500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/16	18-09-2020	51,500/-	51,500/-	36050/-	15450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15450/-

(ii) Balance (Carried forward to next financial year) if applicable: 15450/-






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It is certified that Mr. B. SHIVA PRASAD satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr.B.SHIVA PRASAD
2.	Title of the Project:	Partial replacement of fine aggregate with rubber tyre powder
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	15450
	(ii) Others, If any	NIL
	(iii) Total	15450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15450/-	TKRCET/Principal/R&D/seedfund/2020/16	18-09-2020	51,500/-	15450/-	15450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Mr. B. SHIVA PRASAD satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.

The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/17

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Bamboo Reinforced Concrete: Experimental Investigation on Manga & Dagdi Bamboo” under the guidance of Mr.M.AKHIL KUMAR, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Bamboo Reinforced Concrete: Experimental Investigation on Manga & Dagdi Bamboo” is hereby accorded under the seed fund support project for a total cost of Rs. 48,500/- (Forty Eight Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Manga Bamboo	4300/-
2	Dagdiya Bamboo	6800/-
3	Cement & Admixture	9500/-
4	Aggregate	9500/-
5	Tools & Lubrication oil for mould	8900/-
6	Conveyance & Misc. charges	9500/-
<b>TOTAL</b>		<b>48500/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. AKHIL KUMAR
2.	Title of the Project:	Bamboo Reinforced Concrete: Experimental Investigation on Manga & Dagdi Bamboo
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/17	18-09-2020	48,500/-	48500/-	33950/-	14550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14550/-

(ii) Balance (Carried forward to next financial year) if applicable: 14550/-






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It is certified that Mr. M. Akhil Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr.M.AKHIL KUMAR
2.	Title of the Project:	Bamboo Reinforced Concrete: Experimental Investigation on Manga & Dagdi Bamboo
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14550/-
	(ii) Others, If any	NIL
	(iii) Total	14500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14500/-	TKRCET/Principal/R&D/seedfund/2020/17	18-09-2020	48,500/-	14500/-	14500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. M. Akhil Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/18

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Cyber Criminal and Suspect Profile Generator using OSINT Techniques” under the guidance of Ms. A. Sandhya Rani, Department of Computer Science EngineeringE,TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Cyber Criminal and Suspect Profile Generator using OSINT Techniques” is hereby accorded under the seed fund support project for a total cost of Rs. 51,500/- (Fifty One Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Purchased for API	10000
2	Website Hoisting	12000
3	TA & DA for Attending Conference	15000
4	Field work	6000
5	TA & DA for Attending workshop	5000
<b>Total</b>		<b>51500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. A.Sandhya Rani
2.	Title of the Project:	Cyber Criminal and Suspect Profile Generator using OSINT Techniques
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	51500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/18	18-09-2020	51500/-	51500/-	36050/-	15450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 15450/-

(ii) Balance (Carried forward to next financial year) if applicable: 15450/-



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It is certified that Ms. A.Sandhya Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medhawal, Nearpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Head of Organisation Medhawal, Nearpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. A.Sandhya Rani
2.	Title of the Project:	Cyber Criminal and Suspect Profile Generator using OSINT Techniques
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	15450/-
	(ii) Others, If any	NIL
	(iii) Total	15450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
15450/-	TKRCET/Principal/R&D/seedfund/2020/18	18-09-2020	51500/-	15450/-	15450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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It is certified that Ms. A.Sandhya Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbown, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbown, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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**AN AUTONOMOUS INSTITUTION**

Accredited by NBA and NAAC with 'A' Grade

Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2020/19

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Development of App to capture the field patrolling track of frontline staff in their forest beat jurisdiction” under the guidance of Ms. M. Vijaya kumari, Department of Computer Science Engineering,TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Development of website/app for building customer relationship management in regional language” is hereby accorded under the seed fund support project for a total cost of Rs. 48,500/- (Forty Eight Thousand Five Hundred only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Purchased for API	10000
2	Website Hoisting	10000
3	Collecting the data about forest locations	12000
4	Field work	5000
5	TA & DA for Attending workshop	5000
<b>Total</b>		<b>48500</b>

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TKR College of Engineering & Technology  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. M. Vijaya kumari
2.	Title of the Project:	Development of App to capture the field patrolling track of frontline staff in their forest beat jurisdiction
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/19	18-09-2020	48500/-	48500/-	33950/-	14550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 14550/-

(ii) Balance (Carried forward to next financial year) if applicable: 14550/-




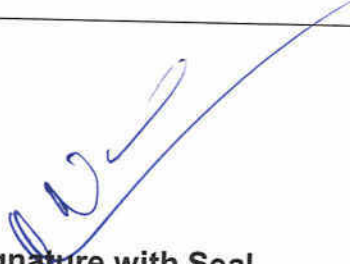

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It is certified that Ms. M. Vijaya kumari satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22**

**as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Ms. M. Vijaya kumari
2.	Title of the Project:	Development of App to capture the field patrolling track of frontline staff in their forest beat jurisdiction
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	14550/-
	(ii) Others, If any	NIL
	(iii) Total	14550/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14550/-	TKRCET/Principal/R&D/seedfund/2020/19	18-09-2020	48500/-	14550/-	14550/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Ms. M. Vijaya kumari satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

<p><i>Vijaya Kumari</i> Signature of PI</p>	<p><i>[Signature]</i> Signature with Seal Name: Finance officer TKR College of Engineering &amp; Technology Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097</p>	<p><i>[Signature]</i> Signature with Seal Name: Principal TKR College of Engineering &amp; Technology Head of Organisation (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097</p>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



TKRCET/Principal/R&D/seedfund/2020/20

College Code: K9

Dt. 18-09-2020

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Women Safety Device with GPS Tracking and Alerts using Arduino” under the guidance of Mr. M. Sharath Chandra, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Women Safety Device with GPS Tracking and Alerts using Arduino” is hereby accorded under the seed fund support project for a total cost of Rs. 57,000/- (Fifty Seven Thousand only). The duration of the project is one year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Arduino Nano	2	11000
2	SIM900 Modem	2	9500
3	NEO6M GPS module	2	14000
4	433 MHZ RF Transmitter and Receiver	2	14000
5	Button	2	1900
6	Battery	2	2500
7	Breadboard	2	550
8	Jumpers	2	3550
<b>TOTAL</b>			<b>57000</b>

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TKR College of Engineering & Technology  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. Sharath Chandra
2.	Title of the Project:	Women Safety Device with GPS Tracking and Alerts using Arduino
3	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	57,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2020/20	18-09-2020	57,000/-	57,000/-	39,900/-	17100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: 17100/-

(ii) Balance (Carried forward to next financial year) if applicable: 17100/-



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It is certified that Mr. M. Sharath Chandra satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2021-22  
as on 31<sup>st</sup> March 2022**

1.	Name of the Principal Investigator:	Mr. M. Sharath Chandra
2.	Title of the Project:	Women Safety Device with GPS Tracking and Alerts using Arduino
3.	Grants position at the beginning of the Financial year	2020-21
	(i) Carry forward from previous financial year	17100/-
	(ii) Others, If any	NIL
	(iii) Total	17100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17100/-	TKRCET/Principal/R&D/seedfund/2020/20	18-09-2020	57,000/-	17100/-	17100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Finance officer</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

TKRCET/Principal/R&D/seedfund/2019/12

Dr. 01-08-2019  
College Code: K9

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Development Of Automatic Irrigation System to Measure the Trace Level Moisture Content in Soil” under the guidance of Dr. Amit Gangopadhyaya, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Development Of Automatic Irrigation System to Measure the Trace Level Moisture Content in Soil” is hereby accorded to the under the seed fund support project for a total cost Rs. 41,000/- (Forty One Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Soil moisture sensor	3	5000
2	Arduino	5	8500
3	LCD	5	2000
4	buzzer	5	3500
5	LED	50	1000
6	relay	5	5000
7	Water pump	3	9500
8	transformer	2	1500
9	Connecting wires	10	1000
10	jumpers	10	1000
11	Power supply	2	2000
12	switches	10	1000
TOTAL			41000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. Amit Gangopadhyaya
2.	Title of the Project:	Development Of Automatic Irrigation System to Measure the Trace Level Moisture Content in Soil
3.	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	41000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/12	01-08-2019	41000/-	41000/-	28700/-	12300/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12300/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12300/-




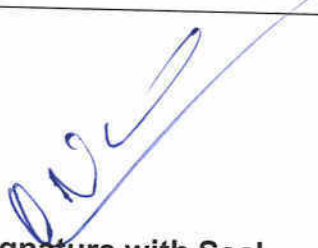

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It is certified that Dr. Amit Gangopadhyaya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Madbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Madbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. Amit Gangopadhyaya
2.	Title of the Project:	Development Of Automatic Irrigation System to Measure the Trace Level Moisture Content in Soil
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	12300/-
	(ii) Others, If any	NIL
	(iii) Total	12300/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12300/-	TKRCET/Principal/R&D/seedfund/2019/12	01-08-2019	41,000/-	12300/-	12300/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Dr. Amit Gangopadhyaya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Madbowli, Meerpel, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/13

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Three Level Security based Voting System using Raspberry Pi And ARM7” under the guidance of Dr. P. Gayathri, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Three Level Security based Voting System using Raspberry Pi And ARM7” is hereby accorded to the under the seed fund support project for a total cost Rs. 37,500/- (Thirty Seven Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Voting Switches	1	500
2	Authority Switch	5	1600
3	Clear Votes Switch	4	5000
4	Mode Selection	4	10000
5	Mode Selection Switch	4	11000
6	LCD Display	2	1500
7	Buzzer	2	2000
8	EEPROM	1	900
9	Computer Interfacing	1	5000
<b>TOTAL</b>			<b>37500</b>

  
Principal

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TKR College of Engineering & Technology  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. P. Gayathri
2.	Title of the Project:	Three Level Security based Voting System using Raspberry Pi And ARM7
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	37500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/13	01-08-2019	37500/-	37500/-	26250/-	11250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11250/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11250/-








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It is certified that Dr. P. Gayathri satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad - 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. P. Gayathri
2.	Title of the Project:	Three Level Security based Voting System using Raspberry Pi And ARM7
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	11250/-
	(ii) Others, If any	NIL
	(iii) Total	11250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11250/-	TKRCET/Principal/R&D/seedfund/2019/13	01-08-2019	42,000/-	11250/-	11250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Dr. P. Gayathri satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medak Hills, Meerpeta, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medak Hills, Meerpeta, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/14

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Brain tumour diagnosis using convolutional neural network” under the guidance of Dr. B. Sunil Srinivas, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Brain tumour diagnosis using convolutional neural network” is hereby accorded to the under the seed fund support project for a total cost of Rs. 47,000/- (Forty Seven Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Hospital Visit and consultancy	20000
2	Collecting data from various hospitals	12000
3	TA & DA for Attending workshop	8000
4	Contingency	4000
5	Others	3000
<b>Total</b>		<b>47000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. B. Sunil Srinivas
2.	Title of the Project:	Brain tumour diagnosis using convolutional neural network
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	47000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/14	01-08-2019	47,000/-	47,000/-	32900/-	14100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 14100/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 14100/-



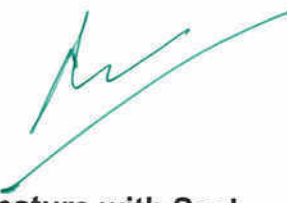
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It is certified that Dr. B. Sunil Srinivas satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. B. Sunil Srinivas
2.	Title of the Project:	Monitoring and Implementation of a new Strategy for Battery Management System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	14100/-
	(ii) Others, If any	NIL
	(iii) Total	14100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14100/-	TKRCET/Principal/R&D/seedfund/2019/14	01-08-2019	42,000/-	14100/-	14100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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College Code: K9

TKRCET/Principal/R&D/seedfund/2019/15

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Design and Fabrication of Biaxial Testing Machine” under the guidance of Dr. M. A. Mateen, Department Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and Fabrication of Biaxial Testing Machine” is hereby accorded to the under the seed fund support project for a total cost of Rs. 58,000/- (Fifty Eight Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Biaxial machine Jaw	4	50,000/-
2	GFRP material	10	8,000/-
<b>TOTAL</b>			<b>58,000/-</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. M. A. Mateen
2.	Title of the Project:	Design and Fabrication of Biaxial Testing Machine
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	58000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/15	01-08-2019	58000/-	58000/-	40600/-	17400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 17400/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 17400/-




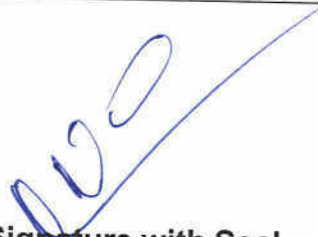

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It is certified that Dr. M. A. Mateen satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad - 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. M. A. Mateen
2.	Title of the Project:	Design and Fabrication of Biaxial Testing Machine
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	17400/-
	(ii) Others, If any	NIL
	(iii) Total	17400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
17400/-	TKRCET/Principal/R&D/seedfund/2019/15	01-08-2019	58,000/-	17400/-	17400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




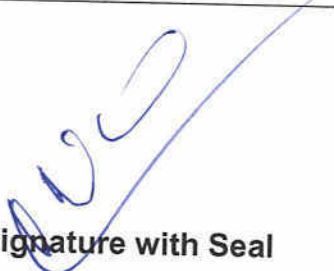

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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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College Code: K9

TKRCET/Principal/R&D/seedfund/2019/16

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Monitoring and Implementation of a new Strategy for Battery Management System**” under the guidance of Dr. M. D. Qutabuddin, Department of Electrical & Electronics Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Monitoring and Implementation of a new Strategy for Battery Management System” is hereby accorded to the under the seed fund support project for a total cost of Rs. 42,000/- (Forty Two Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Microcontroller	1	15000
2	Current sensor	2	10000
3	Voltage sensor	2	5000
4	Temperature sensor	1	2500
5	Relay module	1	2000
6	Display module	2	3000
7	Energy storage module	1	1500
8	Enclosure and wiring	2	3000
TOTAL			42000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. M. D. Qutabuddin
2.	Title of the Project:	Monitoring and Implementation of a new Strategy for Battery Management System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	42000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/16	01-08-2019	42,000/-	42,000/-	29400/-	12600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12600/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12600/-



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It is certified that Dr. M. D. Qutabuddin satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Dr. M. D. Qutabuddin
2.	Title of the Project:	Monitoring and Implementation of a new Strategy for Battery Management System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	12600/-
	(ii) Others, If any	NIL
	(iii) Total	12600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12600/-	TKRCET/Principal/R&D/seedfund/2019/16	01-08-2019	42,000/-	12600/-	12600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




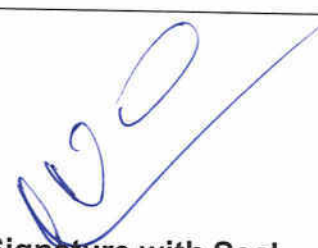

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It is certified that Dr. M. D. Qutabuddin satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Maddurli, Meerpurpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Maddurli, Meerpurpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

Dt. 01-08-2019

TKRCET/Principal/R&D/seedfund/2019/17

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Suspicious Activity Detection” under the guidance of Mr. M. Balakrishna, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Suspicious Activity Detection” is hereby accorded to the under the seed fund support project for a total cost of Rs. 38,000/- (Thirty Eight Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camera	1	27000
2	Sensor to recognize human action	1	4500
3	WD 240 GB SSD	1	6000
4	Miscellaneous	-	500
<b>TOTAL</b>			<b>38000</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. M. Balakrishna
2.	Title of the Project:	Suspicious Activity Detection
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	38,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/17	01-08-2019	38,000/-	38,000/-	26600/-	11400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11400/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11400/-



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It is certified that Mr. M. Balakrishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Maitoli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Principal</b> <b>Name:</b> College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Maitoli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. Balakrishna
2.	Title of the Project:	Suspicious Activity Detection
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	11400/-
	(ii) Others, If any	NIL
	(iii) Total	11400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11400/-	TKRCET/Principal/R&D/seedfund/2019/17	01-08-2019	38,000/-	11400/-	11400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




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It is certified that Mr. M. Balakrishna satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Medipet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Medipet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrcet.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2019/18

Dt. 01-08-2019

## SANCTION ORDER


Subject: Seed fund support for the research project titled “Machining of Composite Materials” under the guidance of Mr. Mohd. Ubed Ur Rahman, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Machining of Composite Materials” is hereby accorded to the under the seed fund support project for a total cost Rs. 36,000/- (Thirty Six Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Composite material	8	16,000
2	Turning Tools	3	20,000
<b>TOTAL</b>			<b>36,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. Mohd. Ubed Ur Rahman
2.	Title of the Project:	<b>Machining of Composite Materials</b>
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	36000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/18	01-08-2019	36000/-	36000/-	25200/-	10800/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10800/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10800/-



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It is certified that Mr. MohdUbed Ur Rahman satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpel, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpel, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. MohdUbed Ur Rahman
2.	Title of the Project:	Machining of Composite Materials
3.	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	10800/-
	(ii) Others, If any	NIL
	(iii) Total	10800/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10800/-	TKRCET/Principal/R&D/seedfund/2019/18	01-08-2019	36,000/-	10800/-	10800/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



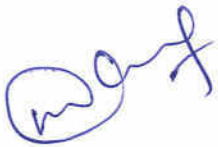


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It is certified that Mr. MohdUbed Ur Rahman satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2019/19

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Eye controlled mouse cursor for physically challenged people” under the guidance of Mr. A. Pradeep, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Eye controlled mouse cursor for physically challenged people” is hereby accorded to the under the seed fund support project for a total cost of Rs. 43,000/- (Forty Three Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Retina Controlled Mouse	15000
2	3D Head Movement capture camera	15000
3	Purchased API	10000
4	Contingency	3000
<b>Total</b>		<b>43000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. A. Pradeep
2.	Title of the Project:	Eye controlled mouse cursor for physically challenged people
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	43000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/19	01-08-2019	43,000/-	43,000/-	30100/-	12900/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12900/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12900/-




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It is certified that Mr. A. Pradeep satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpel, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpel, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21**

**as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. A. Pradeep
2.	Title of the Project:	Eye controlled mouse cursor for physically challenged people
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	12900/-
	(ii) Others, If any	NIL
	(iii) Total	12900/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12900/-	TKRCET/Principal/R&D/seedfund/2019/19	01-08-2019	43,000/-	12900/-	12900/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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It is certified that Mr. A. Pradeep satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2019/20

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “IOT based Solar Powered Automatic Garden Maintenance System” under the guidance of Mr. M. Gnanesh Goud, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “IOT based Solar Powered Automatic Garden Maintenance System” is hereby accorded to the under the seed fund support project for a total cost Rs. 32,000/- (Thirty Two Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Solar Panel	1	9460
2	Battery	1	1200
3	Max 232	1	500
4	Camera	1	2500
5	GSM	1	3500
6	Pump Motor arduino Mega	1	4500
7	LCD	1	6500
8	IoT	5	2000
9	Soil Moisture Sensor	1	500
10	Water Level Sensor	1	450
11	Temp Sensor	1	550
12	Humidity Sensor	1	340
TOTAL			38800

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. M. Gnanesh Goud
2.	Title of the Project:	IOT based Solar Powered Automatic Garden Maintenance System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	32000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/20	01-08-2019	32,000/-	32,000/-	22400/-	9600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 9600/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 9600/-



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It is certified that Mr. M. Gnanesh Goud satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal Finance officer</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal Principal</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. M. Gnanesh Goud
2.	Title of the Project:	IOT based Solar Powered Automatic Garden Maintenance System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	9600/-
	(ii) Others, If any	NIL
	(iii) Total	9600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
9600/-	TKRCET/Principal/R&D/seedfund/2019/20	01-08-2019	32,000/-	9600/-	9600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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It is certified that Mr. M. Gnanesh Goud satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/21

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Privacy Preserving, Updation and Block Level Data Deduplication in Cloud Storage Services” under the guidance of Mr. P. Chandra Shekar, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Privacy Preserving, Updation and Block Level Data Deduplication in Cloud Storage Services” is hereby accorded to the under the seed fund support project for a total cost of Rs. 41,000/- (Forty One Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	SAAS Tenancy	15000
2	TA & DA for Attending workshop	8000
3	Purchased API	15000
4	Contingency	3000
<b>Total</b>		<b>41000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. P. Chandra Shekar
2.	Title of the Project:	Privacy Preserving, Updation and Block Level Data Deduplication in Cloud Storage Services
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	41000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/21	01-08-2019	41000/-	41000/-	28700/-	12300/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12300/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12300/-





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It is certified that Mr. P. Chandra Shekar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> P. Chandra Shekar TKR College of Engineering & Technology (AUTONOMOUS) Medbowl, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal <b>Name:</b> P. Chandra Shekar TKR College of Engineering & Technology (AUTONOMOUS) Medbowl, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. P. Chandra Shekar
2.	Title of the Project:	Monitoring and Implementation of a new Strategy for Battery Management System
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	12300/-
	(ii) Others, If any	NIL
	(iii) Total	12300/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12300/-	TKRCET/Principal/R&D/seedfund/2019/21	01-08-2019	41,000/-	12300/-	12300/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. P. Chandra Shekar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/22

Dt. 01-08-2019

## SANCTION ORDER

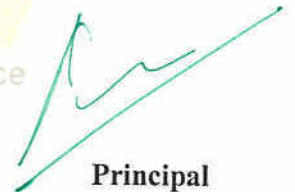
Subject: Seed fund support for the research project titled “Multi Utility Equipment for Blind People using Raspberry Pi” under the guidance of Mr. Purender Reddy, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Multi Utility Equipment For Blind People using Raspberry Pi” is hereby accorded to the under the seed fund support project for a total cost Rs. 38,000/- (Thirty Eight Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camera Module	2	5000
2	Ultrasonic Sensor	2	2400
3	Moisture Sensor	2	1600
4	Head Set	2	5000
5	Buzzer	2	500
6	Speaker	2	9000
7	Raspberry Pi-4	2	14000
<b>TOTAL</b>			<b>38000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. Purender Reddy
2.	Title of the Project:	Multi Utility Equipment for Blind People using Raspberry Pi
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	38000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/22	01-08-2019	38000/-	38000/-	26600/-	11140/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11140/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11140/-



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It is certified that Mr. Purender Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. Purender Reddy
2.	Title of the Project:	Multi Utility Equipment for Blind People using Raspberry Pi
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	11400/-
	(ii) Others, If any	NIL
	(iii) Total	11400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11400/-	TKRCET/Principal/R&D/seedfund/2019/22	01-08-2019	38,000/-	11400/-	11400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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<b>Signature of PI</b>	<b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology . (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	<b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097





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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/23

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Telecom customer churn prediction modelling based on behavioural patterns analysis using machine learning” under the guidance of Ms. M. Pooja, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Telecom customer churn prediction modelling based on behavioural patterns analysis using machine learning” is hereby accorded to the under the seed fund support project for a total cost of Rs. 37,000/- (Thirty Seven Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Collecting data from Mobile Station Controller	12000
2	Visit for Base Stations	10000
3	Purchased API	10000
4	Contingency	3000
5	Others	2000
<b>Total</b>		<b>37000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. M. Pooja
2.	Title of the Project:	Telecom customer churn prediction modelling based on behavioural patterns analysis using machine learning
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	37000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/23	01-08-2019	37,000/-	37,000/-	25900/-	11100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11100/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11100/-



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It is certified that Ms. M. Pooja satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. M. Pooja
2.	Title of the Project:	Telecom customer churn prediction modelling based on behavioural patterns analysis using machine learning
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	11100/-
	(ii) Others, If any	NIL
	(iii) Total	11100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11100/-	TKRCET/Principal/R&D/seedfund/2019/23	01-08-2019	42,000/-	11100/-	11100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2019/24

Dt. 01-08-2019

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**American sign language translator for speech impaired into text and audio**” under the guidance of Ms. Y. Latha, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “American sign language translator for speech impaired into text and audio” is hereby accorded to the under the seed fund support project for a total cost of Rs. 35,000/- (Thirty Five Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Sony D30 Camera	20000
2	Smart assistive device	8000
3	Purchased API	5000
4	Contingency	2000
<b>Total</b>		<b>35000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. Y. Latha
2.	Title of the Project:	American sign language translator for speech impaired into text and audio
3.	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	35000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/24	01-08-2019	35,000/-	35,000/-	24500/-	10500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10500/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10500/-






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It is certified that Ms. Y. Latha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowl, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowl, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Ms. Y. Latha
2.	Title of the Project:	American sign language translator for speech impaired into text and audio
3.	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	10500/-
	(ii) Others, If any	NIL
	(iii) Total	10500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10500/-	TKRCET/Principal/R&D/seedfund/2019/24	01-08-2019	35,000/-	10500/-	10500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

Dt. 01-08-2019

TKRCET/Principal/R&D/seedfund/2019/25

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Driver Drowsiness Detection System using ML” under the guidance of Mr. V. Ravi Kumar, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Driver Drowsiness Detection System using ML” is hereby accorded to the under the seed fund support project for a total cost of Rs. 38,500/- (Thirty Eight Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camera	1	27000
2	Sensor (accelerometer) to detect driver drowsiness	1	5000
3	WD 240 GB SSD	1	6000
4	Miscellaneous	-	500
TOTAL			38500

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. V. Ravi Kumar
2.	Title of the Project:	Driver Drowsiness Detection System using ML
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	38,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2019/25	01-08-2019	38,500/-	38,500/-	26950/-	11550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11550/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11550/-



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It is certified that Mr. V. Ravi Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medhawal, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medhawal, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2020-21  
as on 31<sup>st</sup> March 2021**

1.	Name of the Principal Investigator:	Mr. V. Ravi Kumar
2.	Title of the Project:	Driver Drowsiness Detection System using ML
3	Grants position at the beginning of the Financial year	2019-20
	(i) Carry forward from previous financial year	11550/-
	(ii) Others, If any	NIL
	(iii) Total	11550/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11550/-	TKRCET/Principal/R&D/seedfund/2019/25	01-08-2019	42,000/-	11550/-	11550/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




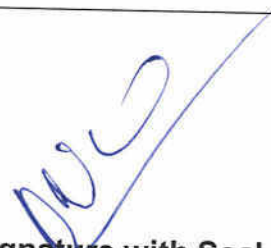

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It is certified that Mr. V. Ravi Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/08

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design and fabrication of FRP Crash Box**” under the guidance of Mr. B. Phani Kumar, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and fabrication of FRP Crash Box” is hereby accorded to the under the seed fund support project for a total cost of Rs. 42,000/- (Forty Two Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Crash moulds	4	30,000
2	material	-	8,000
3	Testing	12	4,000
<b>TOTAL</b>			<b>42,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. B. Phani Kumar
2.	Title of the Project:	Design and fabrication of FRP Crash Box
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	42,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/08	06-08-2018	42,000/-	42,000/-	29400/-	12600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12600/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12600/-



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It is certified that Mr. B. Phani Kumar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. B. Phani Kumar
2.	Title of the Project:	Design and fabrication of FRP Crash Box
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	12600/-
	(ii) Others, If any	NIL
	(iii) Total	12600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12600/-	TKRCET/Principal/R&D/seedfund/2018/08	06-08-2018	42,000/-	12600/-	12600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad - 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad - 500097 <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/09

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Brain Tumor Diagnosis using Machine Learning” under the guidance of Mrs. C.Jaya Lakshmi, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Brain Tumor Diagnosis using Machine Learning” is hereby accorded to the under the seed fund support project for a total cost of Rs. 37,500/- (Thirty Seven Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	MRI Scanner data collection	1	25000
2	Travelling	1	6000
3	WD 240 GB SSD	1	6000
4	Miscellaneous	-	500
<b>TOTAL</b>			<b>37500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	Brain Tumor Diagnosis using Machine Learning
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	37,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/09	06-08-2018	37,500/-	37,500/-	26250/-	11250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11250/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11250/-



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It is certified that Mrs. C.Jaya Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	Brain Tumor Diagnosis using Machine Learning
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	11250/-
	(ii) Others, If any	NIL
	(iii) Total	11250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11250/-	TKRCET/Principal/R&D/seedfund/2018/09	06-08-2018	37,500/-	11250/-	11250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL







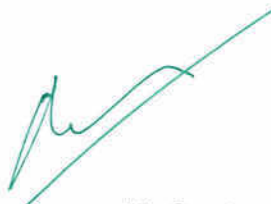
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/10

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “RFID Based Toll Booth Automation” under the guidance of Ms. D. Kavitha, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “RFID Based Toll Booth Automation” is hereby accorded to the under the seed fund support project for a total cost of Rs. 36,500/- (Thirty Six Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	RFID Reader	1	22500
2	RFID Tags	35	6000
3	Antenna	1	7500
4	Miscellaneous	-	500
<b>TOTAL</b>			<b>36500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. D. Kavitha
2.	Title of the Project:	RFID Based Toll Booth Automation
3.	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	36,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/10	06-08-2018	36,500/-	36,500/-	25550/-	10950/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10950/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10950/-



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It is certified that Ms. D. Kavitha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. D. Kavitha
2.	Title of the Project:	RFID Based Toll Booth Automation
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	10950/-
	(ii) Others, If any	NIL
	(iii) Total	10950/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10950/-	TKRCET/Principal/R&D/seedfund/2018/10	06-08-2018	36,500/-	10950/-	10950/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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It is certified that Ms. D. Kavitha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/11

Dt. 06-08-2018

## SANCTION ORDER


Subject: Seed fund support for the research project titled “**Intelligent Reporting System for Monitoring and Resolution of Ground Level Community Issues**” under the guidance of Dr A Suresh Rao, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Intelligent Reporting System for Monitoring and Resolution of Ground Level Community Issues” is hereby accorded to the under the seed fund support project for a total cost of Rs. 45,000/- (Forty Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Collecting data from various locations	10000
2	Field work	10000
3	Purchased API	10000
4	TA & DA for Attending Conference	10000
5	Contingency	5000
<b>Total</b>		<b>45000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr A Suresh Rao
2.	Title of the Project:	Intelligent Reporting System for Monitoring and Resolution of Ground Level Community Issues
3.	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	45,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/11	06-08-2018	45,000/-	45,000/-	31500/-	13500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 13500/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 13500/-








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It is certified that Dr A Suresh Rao satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr A Suresh Rao
2.	Title of the Project:	Intelligent Reporting System for Monitoring and Resolution of Ground Level Community Issues
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	13500/-
	(ii) Others, If any	NIL
	(iii) Total	13500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13500/-	TKRCET/Principal/R&D/seedfund/2018/11	06-08-2018	45,000/-	13500/-	13500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr A Suresh Rao satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2018/12

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Real Time Bus Monitoring and Passenger Information System**” under the guidance of Dr. D. Nageswar Rao, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Real Time Bus Monitoring and Passenger Information System” is hereby accorded to the under the seed fund support project for a total cost of Rs. 46,000/- (Forty Six Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	AT Mega 2560	4	10000
2	LM358 Op-Amp	10	5000
3	ESP32 CAM	4	5000
4	GPS Module	4	7500
5	16X2 LCD Display	4	7000
6	Switches	50	500
7	EM-18 RF-ID Module	2	3000
8	GSM-SIM 800L	2	3000
9	Power Supply	1	3000
10	Connecting Wires	100	1000
11	Jumpers	50	1000
<b>TOTAL</b>			<b>46000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. D. Nageswar Rao
2.	Title of the Project:	Real Time Bus Monitoring and Passenger Information System
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	46,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/12	06-08-2018	46,000/-	46,000/-	32,200/-	13800/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 13800/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 13800/-



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It is certified that Dr. D. Nageswar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. D. Nageswar Rao
2.	Title of the Project:	Real Time Bus Monitoring and Passenger Information System
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	13800/-
	(ii) Others, If any	NIL
	(iii) Total	13800/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13800/-	TKRCET/Principal/R&D/seedfund/2018/12	06-08-2018	46,000/-	13800/-	13800/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr. D. Nageswar Rao satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology <b>Head of Organisation</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/13

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Anaerobic co digestion of water hyacinth and organic solid waste” under the guidance of Dr. Durai Arulneyam, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Anaerobic co digestion of water hyacinth and organic solid waste” is hereby accorded to the under the seed fund support project for a total cost of Rs. 42,500/- (Forty Two Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Water Hyacinth Plant	19000/-
2	Pipe for foul gas conveyance & charges	6500/-
3	Labour charges for Excavation of pit	8000/-
4	Tools & Materials required, Misc. Charges	9000/-
<b>TOTAL</b>		<b>42500/-</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. Durai Arulneyam
2.	Title of the Project:	Anaerobic co digestion of water hyacinth and organic solid waste
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	42,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/13	06-08-2018	42,500/-	42,500/-	29750/-	12750/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12750/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12750/-






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It is certified that Dr. Durai Arulneyam satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. Durai Arulneyam
2.	Title of the Project:	Anaerobic co digestion of water hyacinth and organic solid waste
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	12750/-
	(ii) Others, If any	NIL
	(iii) Total	12750/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12750/-	TKRCET/Principal/R&D/seedfund/2018/13	06-08-2018	42,000/-	12750/-	12750/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Dr. Durai Arulneyam satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2018/14

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Non-Touching Tachometer Using Hall Effect Sensor” under the guidance of Dr. K. Raju, Department of Electrical and Electronics Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Non-Touching Tachometer Using Hall Effect Sensor” is hereby accorded to the under the seed fund support project for a total cost of Rs. 35,000/- (Thirty Five Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Hall effect sensor	9	4500
2	Magnet	10	4000
3	Amplifier circuit	3	4500
4	Display unit	2	2000
5	Power supply	5	12500
6	Wiring and connectors	5	7500
<b>TOTAL</b>			<b>35000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. K. Raju
2.	Title of the Project:	<b>Non-Touching Tachometer Using Hall Effect Sensor</b>
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	35,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/14	06-08-2018	35,000/-	35,000/-	24500/-	10500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10500/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10500/-



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It is certified that Dr. K. Raju satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer Name: _____ TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad - 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. K. Raju
2.	Title of the Project:	Non-Touching Tachometer Using Hall Effect Sensor
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	10500/-
	(ii) Others, If any	NIL
	(iii) Total	10500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10500/-	TKRCET/Principal/R&D/seedfund/2018/14	06-08-2018	35,000/-	10500/-	10500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





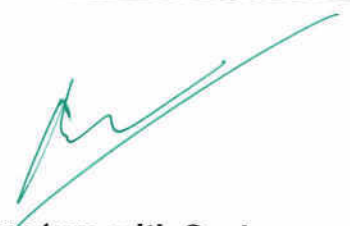
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It is certified that Dr. K. Raju satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

Dt. 06-08-2018

TKRCET/Principal/R&D/seedfund/2018/15

## SANCTION ORDER

Subject: Seed fund support for the research project titled "A study on biofuel production from hostel food waste codigested with maize silage in TKR group of institutions" under the guidance of Dr. Preamsudha, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled "A study on biofuel production from hostel food waste codigested with maize silage in TKR group of institutions" is hereby accorded to the under the seed fund support project for a total cost of Rs. 36,000/- (Thirty Six Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Digester vessel	18600/-
2	Pipe & valve for bio gas conveyance	9800/-
3	Pipe for foul gas conveyance	4500/-
4	Tools & Materials required, Misc. Charges	3100/-
<b>TOTAL</b>		<b>36000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. Preamsudha
2.	Title of the Project:	A study on biofuel production from hostel food waste codigested with maize silage in TKR group of institutions
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	36,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/15	06-08-2018	36,000/-	36,000/-	25200/-	10800/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10800/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10800/-






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It is certified that Dr. Premsudha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. Premsudha
2.	Title of the Project:	A study on biofuel production from hostel food waste codigested with maize silage in TKR group of institutions
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	10800/-
	(ii) Others, If any	NIL
	(iii) Total	10800/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10800/-	TKRCET/Principal/R&D/seedfund/2018/15	06-08-2018	36,000/-	10800/-	10800/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Dr. Premsudha satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2018/16

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Stress distribution along the cruciform geometry under pure in-plane biaxial loading condition**” under the guidance of Dr. Md. A.Mateen, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Stress distribution along the cruciform geometry under pure in-plane biaxial loading condition” is hereby accorded to the under the seed fund support project for a total cost of Rs. 5,80,000/- (Five Lakhs Eighty Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Frame work	1	1,05,000/-
2	Power Pack	1	2,20,000/-
3	Data Acquisition system	1	75,000/-
4	Samples	25	1,00,000/-
5	Testing	25	80,000/-
<b>TOTAL</b>			<b>5,80,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. Md. A.Mateen
2.	Title of the Project:	Stress distribution along the cruciform geometry under pure in-plane biaxial loading condition
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	5,80,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/16	06-08-2018	5,80,000/-	5,80,000	4,06,000/-	1,74,000

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 1,74,000/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 1,74,000/-



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It is certified that Dr. Md. A.Mateen satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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<b>Signature of PI</b>	<b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad- 500097	<b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad- 500097



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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20**

**as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Dr. Md. A.Mateen
2.	Title of the Project:	Stress distribution along the cruciform geometry under pure in-plane biaxial loading condition
3.	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	174000/-
	(ii) Others, If any	NIL
	(iii) Total	174000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
174000/-	TKRCET/Principal/R&D/seedfund/2018/16	06-08-2018	5,80,000/-	174000/-	174000/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2018/17

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Multiple Motion Control System of Robotic Car based on IOT to Produce Cloud Service” under the guidance of Mrs. M. Jhansi Rani, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Multiple Motion Control System of Robotic Car based on IOT to Produce Cloud Service” is hereby accorded to the under the seed fund support project for a total cost of Rs. 38,000/- (Thirty Eight Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Microphone	1	12000
2	Wifi Dongle	1	2000
3	Raspberry Pi 4	1	14000
4	Lcd	1	2000
5	Arduino UNO	1	2000
6	UDS	1	2000
7	GPS	1	1000
8	Motor Driver	2	3000
<b>TOTAL</b>			<b>38000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	M. Jhansi Rani
2.	Title of the Project:	Multiple Motion Control System of Robotic Car based on IOT to Produce Cloud Service
3.	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	38,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/17	06-08-2018	38,000/-	38,000/-	26600/-	11400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11400/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11400/-





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It is certified that Mrs. M. Jhansi Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mrs. M. Jhansi Rani
2.	Title of the Project:	Multiple Motion Control System of Robotic Car based on IOT to Produce Cloud Service
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	11400/-
	(ii) Others, If any	NIL
	(iii) Total	11400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11400/-	TKRCET/Principal/R&D/seedfund/2018/17	06-08-2018	38,000/-	11400/-	11400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL








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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad - 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

TKRCET/Principal/R&D/seedfund/2018/18

College Code: K9

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Resource sharing mechanism between different tenants” under the guidance of Mr K Venugopal Reddy, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Resource sharing mechanism between different tenants” is hereby accorded to the under the seed fund support project for a total cost of Rs. 35,000/- (Thirty Five Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	IAAS tenancy	15000
2	PAAS tenancy	10000
3	TA & DA for Attending Workshop	5000
4	Contingency	3000
5	Others	2000
<b>Total</b>		<b>35000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr K Venugopal Reddy
2.	Title of the Project:	Resource sharing mechanism between different tenants
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	35,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/18	06-08-2018	35,000/-	35,000/-	24500/-	10500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10500/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10500/-





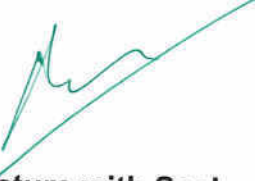
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It is certified that Mr K Venugopal Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr K Venugopal Reddy
2.	Title of the Project:	Resource sharing mechanism between different tenants
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	10500/-
	(ii) Others, If any	NIL
	(iii) Total	10500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10500/-	TKRCET/Principal/R&D/seedfund/2018/18	06-08-2018	35,000/-	10500/-	10500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology, <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/19

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Smart Campus Project Design and Implementation on IOT Platform using Raspberry Pi by Python Approach” under the guidance of Ms. K. Padmaja Devi, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Smart Campus Project Design and Implementation on IOT Platform using Raspberry Pi by Python Approach” is hereby accorded to the under the seed fund support project for a total cost of Rs. 45,000/- (Forty Five Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Temp Sensor	2	14000
2	Iot Devices	5	2000
3	LDR	2	1400
4	Current Sensor	2	2000
5	ESP 8266 Wemos	2	2000
6	IR Sensor	2	600
7	Relay	2	2000
8	Fan	2	3000
9	Light	2	3000
10	Raspberry Pi 3	2	15000
TOTAL			45000

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. K. Padmaja Devi
2.	Title of the Project:	Smart Campus Project Design and Implementation on IOT Platform using Raspberry Pi by Python Approach
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	45,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/19	06-08-2018	45,000/-	45,000/-	31500/-	13500/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 13500/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 13500/-





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It is certified that Ms. K. Padmaja Devi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. K. Padmaja Devi
2.	Title of the Project:	Smart Campus Project Design and Implementation on IOT Platform using Raspberry Pi by Python Approach
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	13500/-
	(ii) Others, If any	NIL
	(iii) Total	13500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13500/-	TKRCET/Principal/R&D/seedfund/2018/19	06-08-2018	45,000/-	13500/-	13500/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Ms. K. Padmaja Devi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> <b>TKR College of Engineering &amp; Technology .</b> <b>Chief Finance Officer (Head</b> <b>of Finance)</b> <b>Medbowli, Meerpet, Hyderabad- 500097</b>	 <b>Signature with Seal</b> <b>Name: Principal</b> <b>TKR College of Engineering &amp; Technology</b> <b>Head of Organisation (AUTONOMOUS)</b> <b>Medbowli, Meerpet, Hyderabad- 500097</b>
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/20

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Cloud log security scheme for cloud forensics” under the guidance of Ms. P Laxmi, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Cloud log security scheme for cloud forensics” is hereby accorded to the under the seed fund support project for a total cost of Rs. 36,000/- (Thirty Six Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Purchasing for cloud logs data	12000
2	Purchased API	10000
3	Cloud Forensic tool Winfex(90)	12000
4	Contingency	2000
5	Purchasing for cloud logs data	12000
<b>Total</b>		<b>36000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. P Laxmi
2.	Title of the Project:	Cloud log security scheme for cloud forensics
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	36,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/20	06-08-2018	36,000/-	36,000/-	25200/-	10800/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 10800/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 10800/-



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It is certified that Ms. P Laxmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. P Laxmi
2.	Title of the Project:	Cloud log security scheme for cloud forensics
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	10800/-
	(ii) Others, If any	NIL
	(iii) Total	10800/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
10800/-	TKRCET/Principal/R&D/seedfund/2018/20	06-08-2018	36,000/-	10800/-	10800/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Ms. P Laxmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Chief Finance Officer (Head of Finance) Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Head of Organisation Medbowli, Meerpet, Hyderabad-500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2018/21

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “IOT based Agriculture Robot for Cultivation Seeding” under the guidance of Ms. P. Kalyani, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “IOT based Agriculture Robot for Cultivation Seeding” is hereby accorded to the under the seed fund support project for a total cost of Rs. 43,500/- (Forty Three Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Solar panel	1	14000
2	Stepper motor	5	2000
3	ESP 32	4	1400
4	Line tracker	4	1800
5	Robot base plate	4	5000
6	Metal Belt for Wheels	2	1100
7	IOT Module	2	1700
8	Distance sensor	1	3000
9	Wi-Fi module	1	2000
10	Servo motor	1	1100
11	L293D	1	10400
<b>TOTAL</b>			<b>43500</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. P. Kalyani
2.	Title of the Project:	IOT based Agriculture Robot for Cultivation Seeding
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	43,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/21	06-08-2018	43,500/-	43,500/-	30450/-	13050/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 13050/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 13050/-




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It is certified that Ms. P. Kalyani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medhawali, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation (US)</b> Medhawali, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. P. Kalyani
2.	Title of the Project:	IOT based Agriculture Robot for Cultivation Seeding
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	13050/-
	(ii) Others, If any	NIL
	(iii) Total	13050/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
13050/-	TKRCET/Principal/R&D/seedfund/2018/21	06-08-2018	43,500/-	13050/-	13050/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Ms. P. Kalyani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet, Balapur, Hyderabad, Telangana - 500 097

Phone : 9100377790, e-mail : info@tkrcet.ac.in Website : www.tkrct.ac.in



College Code : K9

TKRCET/Principal/R&D/seedfund/2018/22

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Characterizing and predicting early-reviewers by sentiment analysis of textual reviews with machine learning approach**” under the guidance of Ms. Manasa Reddy, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Characterizing and predicting early-reviewers by sentiment analysis of textual reviews with machine learning approach” is hereby accorded to the under the seed fund support project for a total cost of Rs. 40,000/- (Forty Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Collecting data from customers reviews	15000
2	TA & DA for Attending Conference	12000
3	TA & DA for Attending Workshop	5000
4	Contingency	5000
5	Others	3000
<b>Total</b>		<b>40000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. Manasa Reddy
2.	Title of the Project:	Characterizing and predicting early-reviewers by sentiment analysis of textual reviews with machine learning approach
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	40,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/22	06-08-2018	40,000/-	40,000/-	28000/-	12000/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 12000/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 12000/-




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It is certified that Ms. Manasa Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation)</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Ms. Manasa Reddy
2.	Title of the Project:	Anaerobic co digestion of water hyacinth and organic solid waste
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	12000/-
	(ii) Others, If any	NIL
	(iii) Total	12000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
12000/-	TKRCET/Principal/R&D/seedfund/2018/22	06-08-2018	40,000/-	12000/-	12000/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Ms. Manasa Reddy satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in

College Code: K9

TKRCET/Principal/R&D/seedfund/2018/23

Dt. 06-08-2018

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design and Fabrication of Extruder for Recycling Domestic Plastic Wastes**” under the guidance of Mr. N. Surya, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and Fabrication of Extruder for Recycling Domestic Plastic Wastes” is hereby accorded to the under the seed fund support project for a total cost of Rs. 62,000/- (Sixty Two Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Motor	1	15,000
2	Barrel	1	12,000
3	Piston setting	1	10,000
4	Compressor	1	25,000
TOTAL			62,000/-

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**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. N. Surya
2.	Title of the Project:	Design and Fabrication of Extruder for Recycling Domestic Plastic Wastes
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	62,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2018/23	06-08-2018	62,000/-	62,000/-	43400/-	18600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 18600/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 18600/-



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It is certified that Mr. N. Surya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad-500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad-500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2019-20  
as on 31<sup>st</sup> March 2020**

1.	Name of the Principal Investigator:	Mr. N. Surya
2.	Title of the Project:	Design and Fabrication of Extruder for Recycling Domestic Plastic Wastes
3	Grants position at the beginning of the Financial year	2018-19
	(i) Carry forward from previous financial year	18600/-
	(ii) Others, If any	NIL
	(iii) Total	18600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
18600/-	TKRCET/Principal/R&D/seedfund/2018/23	06-08-2018	62,000/-	18600/-	18600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Mr. N. Surya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpel, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpel, Hyderabad- 500097 <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/11

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Performance Evaluation of Vapour Compression Refrigeration System by using R-134a and CARE30” under the guidance of Mr. B. Syed Shaheed, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Performance Evaluation of Vapour Compression Refrigeration System by using R-134a and CARE30” is hereby accorded to the under the seed fund support project for a total cost of Rs. 2,30,000/- (Two Lakhs Thirty Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Fabrication work	1	2,10,000/-
2	Gas filling	1	8,000
3	Nano tubes	10gm	14,000
4	hydro carbon	500ml	8,000
<b>TOTAL</b>			<b>2,40,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. B. Syed Shaheed
2.	Title of the Project:	Performance Evaluation of Vapour Compression Refrigeration System by using R-134a and CARE30
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	2,30,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/11	07-08-2017	2,30,000/-	2,30,000/-	161000/-	69000/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 69000/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 69000/-






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It is certified that Mr. B. Syed Shaheed satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Financial Officer</b> TKR College of Engineering & Technology, (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. B. Syed Shaheed
2.	Title of the Project:	Performance Evaluation of Vapour Compression Refrigeration System by using R-134a and CARE30
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	69000/-
	(ii) Others, If any	NIL
	(iii) Total	69000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
69000/-	TKRCET/Principal/R&D/seedfund/2017/11	07-08-2017	2,30,000/-	69000/-	69000/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer Name: TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal Name: TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/12

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “An Efficient Diet Plan using Artificial Intelligence Dietician” under the guidance of Mrs. C.Jaya Lakshmi, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “An Efficient Diet Plan using Artificial Intelligence Dietician” is hereby accorded to the under the seed fund support project for a total cost of Rs. 31,500/- (Thirty One Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	digital scales, blood glucose meters, and heart rate monitor sensor	1	24500
2	WD 240 GB SSD	1	6000
3	Miscellaneous	-	1000
<b>TOTAL</b>			<b>31500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18**

**as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	An Efficient Diet Plan using Artificial Intelligence Dietician
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	31,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/12	07-08-2017	31,500/-	31,500/-	22050/-	9450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 9450/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 9450/-




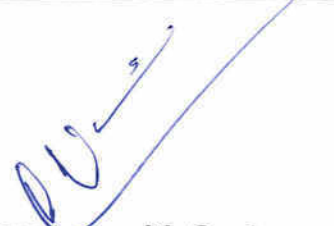

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It is certified that Mrs. C.Jaya Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer Name: TKR College of Engineering & Technology (AUTONOMOUS) Meddow Hills, Wazirpet, Hyderabad - 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal Name: TKR College of Engineering & Technology (AUTONOMOUS) Meddow Hills, Wazirpet, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mrs. C.Jaya Lakshmi
2.	Title of the Project:	An Efficient Diet Plan using Artificial Intelligence Dietician
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	9450/-
	(ii) Others, If any	NIL
	(iii) Total	9450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
9450/-	TKRCET/Principal/R&D/seedfund/2017/12	07-08-2017	31,500/-	9450/-	9450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL





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It is certified that Mrs. C.Jaya Lakshmi satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/13

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Study and performance of water quality in aquaculture through non-chemical water treatment method**” under the guidance of of Dr. K. NAVEENA LATHA, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Study and performance of water quality in aquaculture through non-chemical water treatment method” is hereby accorded to the under the seed fund support project for a total cost of Rs. 2,40,000/- (Two Lakhs Forty Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Tank	1	1,05,000
2	Motor	1	15,000
3	compressor	1	25,000
4	Testing	150	95,000
<b>Total</b>			<b>2,40,000/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Dr. K. NAVEENA LATHA
2.	Title of the Project:	Study and performance of water quality in aquaculture through non-chemical water treatment method
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	2,40,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/13	07-08-2017	2,40,000/-	2,40,000/-	168000/-	72000/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 72000/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 72000/-



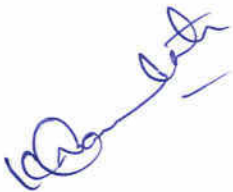


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It is certified that Dr. K. NAVEENA LATHA satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. K. NAVEENA LATHA
2.	Title of the Project:	Study and performance of water quality in aquaculture through non-chemical water treatment method
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	72000/-
	(ii) Others, If any	NIL
	(iii) Total	72000/-

**4. Details of grants received, expenditure incurred and closing balances:**

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
72000/-	TKRCET/Principal/R&D/seedfund/2017/13	07-08-2017	2,40,000/-	72000/-	72000/-	NIL

**5. Details of grants position at the end of the year**

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Dr. K. NAVEENA LATHA satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/14

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design and Fabrication of Degassing Vacuum Chamber**” under the guidance of Dr. D. V. Ravi Shankar, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design and Fabrication of Degassing Vacuum Chamber” is hereby accorded to the under the seed fund support project for a total cost of Rs. 68,200/- (Sixty Eight Thousand Two Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Degas cylinder	1	31,000
2	Fabrication	1	26,000
3	vacuum pump	1	8,000
4	Pressure gauge	4	3,200
<b>TOTAL</b>			<b>68,200/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Dr. D. V. Ravi Shankar
2.	Title of the Project:	Design and Fabrication of Degassing Vacuum Chamber
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	68,200/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/14	07-08-2017	68,200/-	68,200/-	47740/-	20460/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 20460/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 20460/-








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It is certified that Dr. D. V. Ravi Shankar satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> M. Chowli, Mearpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> M. Chowli, Mearpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. D. V. Ravi Shankar
2.	Title of the Project:	Design and Fabrication of Degassing Vacuum Chamber
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	20460/-
	(ii) Others, If any	NIL
	(iii) Total	20460/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
20460/-	TKRCET/Principal/R&D/seedfund/2017/14	07-08-2017	68,200/-	20460/-	20460/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Hyderabad-500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Heerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/15

Dt. 07-08-2017

## SANCTION ORDER

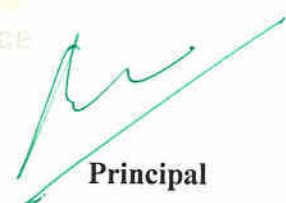
Subject: Seed fund support for the research project titled “An Efficient Approach for Enhancing Search Results using Correlation Method” under the guidance of Dr. K. Ramesh, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “An Efficient Approach for Enhancing Search Results using Correlation Method” is hereby accorded to the under the seed fund support project for a total cost of Rs. 47,500/- (Forty Seven Thousand Eight Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	GPU Processor	20000
2	YARN framework	10000
3	TA & DA for Attending Workshop	8000
4	Contingency	6000
5	Others	3500
<b>Total</b>		<b>47500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Dr. K. Ramesh
2.	Title of the Project:	An Efficient Approach for Enhancing Search Results using Correlation Method
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	47,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/15	07-08-2017	47,500/-	47,500/-	33250/-	14250/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 14250/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 14250/-




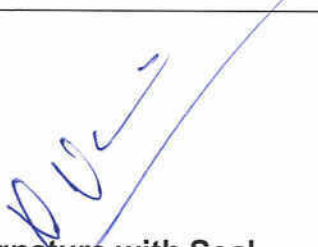

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It is certified that Dr. K. Ramesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medaboini, Medipet, Hyderabad - 500097	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medaboini, Medipet, Hyderabad - 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. K. Ramesh
2.	Title of the Project:	An Efficient Approach for Enhancing Search Results using Correlation Method
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	14250/-
	(ii) Others, If any	NIL
	(iii) Total	14250/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14250/-	TKRCET/Principal/R&D/seedfund/2017/15	07-08-2017	47,500/-	14250/-	14250/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Meddow, Nearpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Principal</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Meddow, Nearpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/16

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled "IOT based Health Monitoring System" under the guidance of Dr. P. Nalla Thai, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled "IOT based Health Monitoring System" is hereby accorded to the under the seed fund support project for a total cost of Rs. 31,100/- (Thirty One Thousand One Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Heart beat sensor	1	14000
2	IOT Devices	5	2000
3	Blood pressure sensor	4	1400
4	Short message service	4	2000
5	Acess point	4	800
6	Global positioning system	2	600
7	Wi-fi	2	2000
8	Bluetooth	1	3000
9	Zigbee	1	3000
10	GPRS/LTE	1	2300
<b>TOTAL</b>			<b>28500</b>

  
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Dr.P.Nalla Thai
2.	Title of the Project:	IOT based Health Monitoring System
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	31,100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/16	07-08-2017	31,100/-	31,100/-	21770/-	9330/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 9330/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 9330/-



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It is certified that Dr. P. Nalla Thai satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. P. Nalla Thai
2.	Title of the Project:	Anaerobic co digestion of water hyacinth and organic solid waste
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	9330/-
	(ii) Others, If any	NIL
	(iii) Total	9330/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
9330/-	TKRCET/Principal/R&D/seedfund/2017/16	07-08-2017	31,100/-	9330/-	9330/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




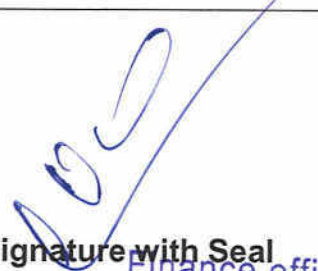

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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Finance officer</b> Name: TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Principal</b> Name: TKR College of Engineering & Technology (AUTONOMOUS) Medbowli, Meerpet, Hyderabad- 500097 <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/17

Dt. 07-08-2017

## SANCTION ORDER

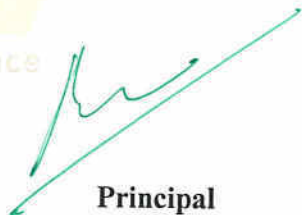
Subject: Seed fund support for the research project titled “Partition- Based Frequent Item Set Mining Algorithms on Map Reduces” under the guidance of Dr. S. Somaraju, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Partition- Based Frequent Item Set Mining Algorithms on Map Reduces” is hereby accorded to the under the seed fund support project for a total cost of Rs. 39,500/- (Thirty Nine Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	GPU Processor	15000
2	YARN framework	10000
3	TA & DA for Attending Workshop	6000
4	Contingency	5000
5	Others	3500
<b>Total</b>		<b>39500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Dr. S. Somaraju
2.	Title of the Project:	Partition- Based Frequent Item Set Mining Algorithms on Map Reduces
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	39,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/17	07-08-2017	39,500/-	39,500/-	27650/-	11850/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11850/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11850/-






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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Dr. S. Somaraju
2.	Title of the Project:	Partition- Based Frequent Item Set Mining Algorithms on Map Reduces
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	11850/-
	(ii) Others, If any	NIL
	(iii) Total	11850/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11850/-	TKRCET/Principal/R&D/seedfund/2017/17	07-08-2017	39,500/-	11850/-	11850/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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Medbowli, Meerpet, Balapur, Hyderabad, Telangana - 500 097

Phone : 9100377790, e-mail : info@tkrcet.ac.in Website : www.tkrct.ac.in



College Code : K9

TKRCET/Principal/R&D/seedfund/2017/18

Dt. 07-08-2017

### SANCTION ORDER

Subject: Seed fund support for the research project titled “**Design & fabrication of vellomobile/Bike car**” under the guidance of Mr. G. Sai Krishna Prasad, Department of Mechanical Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Design & fabrication of vellomobile/Bike car” is hereby accorded to the under the seed fund support project for a total cost of Rs. 72,500/- (Seventy Two Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO.	Component	Cost (Rs.)
1	DC Motor	10542
2	T Slot for Motor Mounting	20530
3	2 Battery	3000
4	Tail Light and Indicator	956
5	Front Light and Horn	3022
6	Speedometer	12000
7	Charging System	5000
8	Electronic Control Unit	17450
<b>Total</b>		<b>72,500/-</b>



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Medbowli, Meerpet, Hyderabad- 500097



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Accredited by NBA & NAAC with 'A' Grade)



**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18**

**as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. G.Sai Krishna Prasad
2.	Title of the Project:	Design & fabrication of vellomobile/Bike car
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	72,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/18	07-08-2017	72,500/-	72,500/-	50750/-	21750/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 21750/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 21750/-






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It is certified that Mr. G. Sai Krishna Prasad satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <p><b>Signature of PI</b></p>	 <p><b>Signature with Seal</b> Name: Finance officer TKR College of Engineering &amp; Technology <b>Chief Finance Officer (Head of Finance)</b> Hyderabad- 500097</p>	 <p><b>Signature with Seal</b> Principal TKR College of Engineering &amp; Technology (AUTONOMOUS) Hyderabad- 500097 <b>Head of Organisation</b></p>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. G. Sai Krishna Prasad
2.	Title of the Project:	Design & fabrication of vellomobile/Bike car
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	21750/-
	(ii) Others, If any	NIL
	(iii) Total	21750/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
21750/-	TKRCET/Principal/R&D/seedfund/2017/18	07-08-2017	72,500/-	21750/-	21750/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Mr. G. Sai Krishna Prasad satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/19

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Garbage Monitoring with Weight Sensing Using IOT” under the guidance of Mr. K.Naresh, Department of Information Technology, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Garbage Monitoring with Weight Sensing Using IOT” is hereby accorded to the under the seed fund support project for a total cost of Rs. 48,800/- (Forty Eight Thousand Eight Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Weight sensor	1	6500
2	AWS or Azure Service	1	20300
3	IoT Gateway	1	21500
4	Miscellaneous	-	500
<b>TOTAL</b>			<b>48800</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. K.Naresh
2.	Title of the Project:	Garbage Monitoring with Weight Sensing Using IOT
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,800/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/19	07-08-2017	48,800/-	48,800/-	34160/-	14640/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 14640/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 14640/-



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It is certified that Mr. K.Naresh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medowli, Nearpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medowli, Nearpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. K.Naresh
2.	Title of the Project:	Garbage Monitoring with Weight Sensing Using IOT
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	14640/-
	(ii) Others, If any	NIL
	(iii) Total	14640/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14640/-	TKRCET/Principal/R&D/seedfund/2017/19	07-08-2017	48,800/-	14640/-	14640/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/20

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Aiding Deaf and Dumb People to Communicate Effectively using a Raspberry-pi Based System” under the guidance of Ms. M.Thanmayee, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Aiding Deaf and Dumb People to Communicate Effectively using a Raspberry-pi Based System” is hereby accorded to the under the seed fund support project for a total cost of Rs. 39,500/- (Thirty Nine Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Raspberry-PI kit	15500
2	Multimedia Speakers	8000
3	Sensors (4)	9000
4	AHUJA head set	3500
5	Actuators	3500
<b>Total</b>		<b>39500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18**

**as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Ms. M.Thanmayee
2.	Title of the Project:	Aiding Deaf and Dumb People to Communicate Effectively using a Raspberry-pi Based System
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	39,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/20	07-08-2017	39,500/-	39,500/-	27650/-	11850/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11850/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11850/-





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It is certified that Ms. M.Thanmayee satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. M.Thanmayee
2.	Title of the Project:	Aiding Deaf and Dumb People to Communicate Effectively using a Raspberry-pi Based System
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	11850/-
	(ii) Others, If any	NIL
	(iii) Total	11850/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11850/-	TKRCET/Principal/R&D/seedfund/2017/20	07-08-2017	39,500/-	11850/-	12750/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






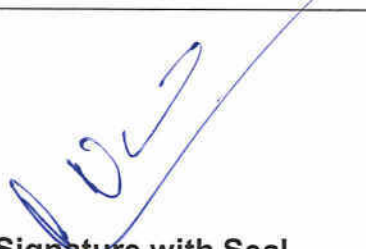

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It is certified that Ms. M.Thanmayee satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/21

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Experimental Study on Fly Ash Pellet Concrete for Mechanical Properties**” under the guidance of Mr. G. Durga Prasad, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “**Experimental Study on Fly Ash Pellet Concrete for Mechanical Properties**” is hereby accorded to the under the seed fund support project for a total cost of Rs. 31,500/- (Thirty One Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Fly ash pellet	7900/-
2	Cement Bags	5600/-
3	Aggregate (Fine & Coarse)	8500/-
4	Tools, Conveyance charges & Misc.	9500/-
<b>TOTAL</b>		<b>31500/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. G. Durga Prasad
2.	Title of the Project:	Experimental Study on Fly Ash Pellet Concrete for Mechanical Properties
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	31,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/21	07-08-2017	31,500/-	31,500/-	22050/-	9450/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 9450/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 9450/-





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It is certified that Mr. G. Durga Prasad satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) Medowhill, Madhapur, Hyderabad- 500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) Medowhill, Madhapur, Hyderabad- 500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. G. Durga Prasad
2.	Title of the Project:	Experimental Study on Fly Ash Pellet Concrete for Mechanical Properties
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	9450/-
	(ii) Others, If any	NIL
	(iii) Total	9450/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
9450/-	TKRCET/Principal/R&D/seedfund/2017/21	07-08-2017	31,500/-	9450/-	9450/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Finance officer <b>Name:</b> _____ <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Principal <b>Name:</b> _____ <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/22

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Partial Replacement of Coconut shell as Coarse aggregate in the Concrete**” under the guidance of of Mr. S. SELVAKUMAR, Department of Civil Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Partial Replacement of Coconut shell as Coarse aggregate in the Concrete” is hereby accorded to the under the seed fund support project for a total cost of Rs. 29,500/- (Twenty Nine Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

Sl. No.	Materials & Description	Cost (Rs.)
1	Coconut shells & breaking	3500/-
2	Cement & Admixtures	7600/-
3	Aggregate (Fine & Coarse)	8900/-
4	Tools, Lubrication oil, Conveyance charges & Misc.	9500/-
<b>TOTAL</b>		<b>29500/-</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. S. SELVAKUMAR
2.	Title of the Project:	Partial Replacement of Coconut shell as Coarse aggregate in the Concrete
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	29,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/22	07-08-2017	29,500/-	29,500/-	20650/-	8850/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 8850/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 8850/-








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It is certified that Mr. S. SELVAKUMAR satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> Finance officer TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpel, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name:</b> Principal TKR College of Engineering & Technology <b>Head of Organisation</b> Medbowli, Meerpel, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. S. SELVAKUMAR
2.	Title of the Project:	Partial Replacement of Coconut shell as Coarse aggregate in the Concrete
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	8850/-
	(ii) Others, If any	NIL
	(iii) Total	8850/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
8850/-	TKRCET/Principal/R&D/seedfund/2017/22	07-08-2017	29,500/-	8850/-	8850/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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It is certified that Mr. S. SELVAKUMAR satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medhovi, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medhovi, Meerpet, Hyderabad- 500097
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/23

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “**Effective Implementation of Youtube Data Analysis using Hadoop Distributed File System(HDFS)**” under the guidance of Ms. A.Sandhya Rani, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Effective Implementation of Youtube Data Analysis using Hadoop Distributed File System(HDFS)” is hereby accorded to the under the seed fund support project for a total cost of Rs. 48,000/- (Forty Eight Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	GPU Processor	20000
2	YARN framework	10000
3	TA & DA for Attending Workshop	8000
4	Contingency	6500
5	Others	3500
<b>Total</b>		<b>48000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Ms. A. Sandhya Rani
2.	Title of the Project:	Effective Implementation of Youtube Data Analysis using Hadoop Distributed File System(HDFS)
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	48,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/23	07-08-2017	48,000/-	48,000/-	33600/-	14400/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 14400/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 14400/-






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It is certified that Ms. A.Sandhya Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name: Finance officer</b> TKR College of Engineering & Technology <b>Chief Finance Officer (Head of Finance)</b> Medow, Mearpet, Hyderabad- 500097	 <b>Signature with Seal</b> <b>Name: Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medow, Mearpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. A.Sandhya Rani
2.	Title of the Project:	Effective Implementation of Youtube Data Analysis using Hadoop Distributed File System(HDFS)
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	14400/-
	(ii) Others, If any	NIL
	(iii) Total	14400/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14400/-	TKRCET/Principal/R&D/seedfund/2017/23	07-08-2017	48,000/-	14400/-	14400/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that Ms. A.Sandhya Rani satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Maddur, Nearpet, Hyderabad-500097	 <b>Signature with Seal</b> Principal Name: TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Maddur, Nearpet, Hyderabad- 500097
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/24

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Automation of Dry-Wet Dust Collection to Support Swachh Bharat Abhiyaan and Monitoring over IOT” under the guidance of Ms. J. Sunitha Kumari, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Automation of Dry-Wet Dust Collection to Support Swachh Bharat Abhiyaan and Monitoring over IOT” is hereby accorded to the under the seed fund support project for a total cost of Rs. 39,500/- (Thirty Nine Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	8051 controller	1	10500
2	DC Motor	2	2000
3	9V, 500mA Regulated Power Supply	1	3000
4	16×2 LCD Display	2	5000
5	RF Module (Tx, Rx )	3	15000
6	16×2 LCD Display	2	4000
7	Connecting Wires and Miscellaneous	-	500
<b>TOTAL</b>			<b>39500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Ms. J. Sunitha Kumari
2.	Title of the Project:	Automation of Dry-Wet Dust Collection to Support Swachh Bharat Abhiyaan and Monitoring over IOT
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	39,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/24	07-08-2017	39,500/-	39,500/-	27650/-	11850/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11850/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11850/-






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It is certified that Ms. J. Sunitha Kumari satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad- 500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. J. Sunitha Kumari
2.	Title of the Project:	Automation of Dry-Wet Dust Collection to Support Swachh Bharat Abhiyaan and Monitoring over IOT
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	11850/-
	(ii) Others, If any	NIL
	(iii) Total	11850/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11850/-	TKRCET/Principal/R&D/seedfund/2017/24	07-08-2017	39,500/-	11850/-	11850/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL



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- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Finance officer</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Principal</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad- 500097
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College Code: K9

TKRCET/Principal/R&D/seedfund/2017/25

Dt. 07-08-2017

## SANCTION ORDER


Subject: Seed fund support for the research project titled “Smart E-Agriculture Monitoring using Internet of Things” under the guidance of Ms. K. Sukanya, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Smart E-Agriculture Monitoring using Internet of Things” is hereby accorded to the under the seed fund support project for a total cost of Rs. 47,000/- (Forty Seven Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Breadboard	3	20000
2	Connecting cable	5	7000
3	Jumper Wire	4	1500
4	Nodemcu (esp8266)	4	10000
5	Nodemcu cable	4	5000
6	Soil moisture sensor	2	3500
<b>TOTAL</b>			<b>47000</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Ms. K. Sukanya
2.	Title of the Project:	Smart E-Agriculture Monitoring using Internet of Things
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	47,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/25	07-08-2017	47,000/-	47,000/-	32900/-	14100/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 14100/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 14100/-



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It is certified that Ms. K. Sukanya satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: <b>Finance officer</b> TKR College of Engineering & Technology . (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> Medbowli, Meerpet, Hyderabad-500097	 <b>Signature with Seal</b> Name: <b>Principal</b> TKR College of Engineering & Technology . (AUTONOMOUS) <b>Head of Organisation</b> Medbowli, Meerpet, Hyderabad-500097
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Ms. K. Sukanya
2.	Title of the Project:	Smart E-Agriculture Monitoring using Internet of Things
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	14100/-
	(ii) Others, If any	NIL
	(iii) Total	14100/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
14100/-	TKRCET/Principal/R&D/seedfund/2017/25	07-08-2017	47,000/-	14100/-	14100/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL




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 <b>Signature of PI</b>	 <b>Signature with Seal</b> Name: Finance officer TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> Name: Principal TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b>
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Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/26

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Time Decay Model Approach for Mining Closed Frequent Patterns Over Data streams” under the guidance of P. Mahesh Kumar, Department of Computer Science Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Time Decay Model Approach for Mining Closed Frequent Patterns Over Data streams” is hereby accorded to the under the seed fund support project for a total cost of Rs. 32,000/- (Thirty Two Thousand only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Amount
1	Data streams collection	10000
2	TA & DA for Attending Workshop	8000
3	Purchased for API	10000
4	Contingency	3000
5	Others	1000
<b>Total</b>		<b>32000</b>

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Medbowli, Meerpet, Hyderabad- 500097



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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18**

**as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	P. Mahesh
2.	Title of the Project:	Time Decay Model Approach for Mining Closed Frequent Patterns Over Data streams
3.	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	32,000/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/26	07-08-2017	32,000/-	32,000/-	22400/-	9600/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 9600/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 9600/-




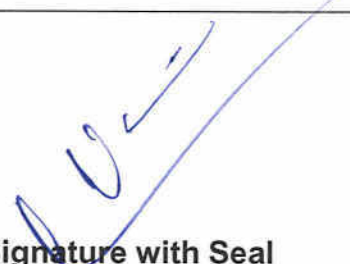

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It is certified that P. Mahesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal Finance officer</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medhooli, Manspet, Hyderabad-500097 <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal Principal</b> <b>Name:</b> TKR College of Engineering & Technology (AUTONOMOUS) Medhooli, Manspet, Hyderabad-500097 <b>Head of Organisation</b>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19  
as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	P. Mahesh
2.	Title of the Project:	Time Decay Model Approach for Mining Closed Frequent Patterns Over Data streams
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	9600/-
	(ii) Others, If any	NIL
	(iii) Total	9600/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
9600/-	TKRCET/Principal/R&D/seedfund/2017/26	07-08-2017	32,000/-	9600/-	9600/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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It is certified that P. Mahesh satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal Finance officer</b> Name: TKR College of Engineering & Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal Principal</b> Name: TKR College of Engineering & Technology (AUTONOMOUS) <b>Head of Organisation</b>
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# TKR COLLEGE OF ENGINEERING & TECHNOLOGY

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Medbowli, Meerpet (V), Balapur (M) Ranga Reddy (D), Hyderabad, Telangana - 500097

Mobile: 9100377790, E-mail: info@tkrcet.ac.in, Website: www.tkrct.ac.in



College Code: K9

TKRCET/Principal/R&D/seedfund/2017/27

Dt. 07-08-2017

## SANCTION ORDER

Subject: Seed fund support for the research project titled “Virtual Banking System” under the guidance of Mr. Syed Salmaan Rashid, Department of Electronics and Communication Engineering, TKR College of Engineering and Technology, Hyderabad.

We are glad to inform you that the research project titled “Virtual Banking System” is hereby accorded to the under the seed fund support project for a total cost of Rs. 38,500/- (Thirty Eight Thousand Five Hundred only). The duration of project is One year.

The details of the budget sanctioned for each component is given below.

S.NO	Name of the Component	Quantity	Amount
1	Camera	1	2500
2	Scanner	1	4000
3	Pc	1	27500
4	Wifi	1	4500
<b>TOTAL</b>			<b>38500</b>

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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2017-18  
as on 31<sup>st</sup> March 2018**

1.	Name of the Principal Investigator:	Mr. Syed Salmaan Rashid
2.	Title of the Project:	Virtual Banking System
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	NIL
	(ii) Others, If any	NIL
	(iii) Total	38,500/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
NIL	TKRCET/Principal/R&D/seedfund/2017/27	07-08-2017	38,500/-	38,500/-	20950/-	11550/-

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: Rs. 11550/-

(ii) Balance (Carried forward to next financial year) if applicable: Rs. 11550/-



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It is certified that Mr. Syed Salmaan Rashid satisfied that the conditions on which grants were sanctioned the following checks are exercised, to see that the money has been actually utilized for the purpose for which it was sanctioned:

- (i) The main accounts and other subsidiary accounts and registers (including assets registers) are maintained and have been duly audited by designated auditors.
- (ii) There exist internal controls for watching outcomes and achievements of physical targets against the financial inputs, ensuring quality in asset creation etc. & the periodic evaluation of internal controls is exercised to ensure their effectiveness.
- (iii) To the best of our knowledge and belief, no transactions have been entered that are in violation of guidelines.
- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <p><b>Signature of PI</b></p>	 <p><b>Signature with Seal</b> Finance officer <b>Name:</b> TKR College of Engineering &amp; Technology (AUTONOMOUS) <b>Chief Finance Officer (Head of Finance)</b> TKR College of Engineering &amp; Technology Medbowli, Meerpet, Hyderabad- 500097</p>	 <p><b>Signature with Seal</b> Principal <b>Name:</b> TKR College of Engineering &amp; Technology (AUTONOMOUS) <b>Head of Organisation</b> TKR College of Engineering &amp; Technology Medbowli, Meerpet, Hyderabad- 500097</p>
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**UTILIZATION CERTIFICATE (UC) FOR THE YEAR 2018-19**

**as on 31<sup>st</sup> March 2019**

1.	Name of the Principal Investigator:	Mr. Syed Salmaan Rashid
2.	Title of the Project:	Virtual Banking System
3	Grants position at the beginning of the Financial year	2017-18
	(i) Carry forward from previous financial year	11150/-
	(ii) Others, If any	NIL
	(iii) Total	12750/-

4. Details of grants received, expenditure incurred and closing balances:

Unspent Balance of Grants received previous years	Grants received during the year			Total Available funds	Expenditure incurred	Closing Balances
	Sanction No.	Date	Amount			
11150/-	TKRCET/Principal/R&D/seedfund/2017/27	07-08-2017	38,500/-	11150/-	11150/-	NIL

5. Details of grants position at the end of the year

(i) Balance available at end of financial year: NIL

(ii) Balance (Carried forward to next financial year) if applicable: NIL






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- (iv) The benefits were extended to the intended beneficiaries where the seed money was intended to operate.
- (v) The expenditure on various components as per the proposal was in the proportions authorized as per the seed money guidelines and terms and conditions of the grants-in-aid.

 <b>Signature of PI</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Chief Finance Officer (Head of Finance)</b>	 <b>Signature with Seal</b> <b>Name:</b> <b>Head of Organisation</b>
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