



R17 Regulation

Subject code: 1E7DD

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech IV Year I Semester Regular Examinations, February 2021

CELLULAR AND MOBILE COMMUNICATIONS

(Electronics and Communication Engineering)

Maximum Marks: 70

Date: 27.02.2021 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

1. Mention the elements of basic cellular systems
2. Define Doppler Spread and Coherence Time.
3. Define space diversity technique
4. What are the types of diversity?
5. What are the advantages of LEE model
6. Write the equation of effective antenna height gain.
7. Differentiate channel sharing and borrowing.
8. Define paging channel.
9. What is mobile assisted handoff ?
10. Define dropped call

Part-B

Answer All the following questions.

(10M X 5=50Marks)

11. What are the limitations of conventional mobile telephone system? Describe the various Generations of wireless mobile communication? (10M)
OR
12. What are the techniques to improve Coverage and Capacity in Cellular systems? (10M)
13. Explain the co-channel interference reduction factor and derive the general formula for C/I. (10M)
OR
14. Explain in detail about the effects of Coverage and Interference by Power Decrease. (10M)
15. Explain the effects of human made structures for mobile propagation in open area. (10M)
OR
16. Discuss about different type of antennas used at cell site. (10M)

- 17 Explain the following terms(10M)
(a) Numbering
(b) Grouping

OR

- 18 Explain the channel assignment to the cell sites based on the adjacent channels. (10M)
- 19 What is a dropped call and how can we evaluate the same?(10M)

OR

- 20 What are the various handoff strategies based on algorithms of handoff? Explain in detail. (10M)