



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 2P5FA

B.Tech V Semester Regular Examinations, February 2021

Operating Systems **(Information Technology)**

Maximum Marks: 70

Date: 17.02.2021 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 Categorize the various types of system calls and explain with examples.
- 2 Explain the difference between user view and System View.
- 3 Explain about interprocess communication
- 4 Describe about semaphores and monitors.
- 5 Explain swapping and its types.
- 6 Describe the structure of Page Table.
- 7 What is Thrashing ?
- 8 Explain Demand Paging ?
- 9 Compare Access Matrix, Access Control and Access Rights revocation.
- 10 Explain Language based Protection in Operating systems.

Part-B

Answer All the following questions. (10M X 5=50Marks)

- 11 Explain the Computer System Architecture, OS structure and Operations with neat sketch.(10M)

OR

- 12 Explain in detail about Process, memory and storage management along with protection and security provided by Operating Systems.(10M)

- 13
 - a) Explain the system calls – fork(), exec(), wait(), exit() (5M)
 - b) Explain Process Control Block (5M)

OR

- 14
 - a) Explain various Processing Scheduling algorithms. (5M)
 - b) Explain in detail about the solutions on classical problem synchronization. (5M)

- 15 Analyze the methods of handling deadlocks by prevention, avoidance, detection and recovery. (10M)

OR

- 16 Explain the difference between segmentation and paging with neat sketch and examples. (10M)

- 17 Explain various page replacement algorithms with examples and evaluate them.(10M)
OR
18 Describe the various system calls for file operations with examples.(10M)
19 Illustrate the File system Implementation and Free space management.(10M)
OR
20 Elaborate on the implementation of Windows VISTA Operating system features. (10M)