



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 205DE

B.Tech V Semester Regular Examinations, February 2021

Operating Systems

(Electronics and Communication Engineering)

Maximum Marks: 70

Date: 26.02.2021 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 10 Questions. Answer any five questions.
 4. Each question carries 12 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 List out the operating system functions.
- 3 Define protection and security
- 4 Specify preemptive and non-preemptive?
- 5 Explain swapping and its types.
- 6 Define compaction.
- 7 What is Thrashing ?
- 8 Differentiate demand paging and pure demand paging?
- 9 Explain Access control?
- 10 Discuss goals of protection.

Part-B

Answer any five from the following questions.

(5 X 10=50Marks)

- 11 Describe different types of system architectures. (10M)
OR
- 12 Explain in detail about Process, memory and storage management along with protection and security provided by Operating Systems. (10M)
- 13 Briefly explain the dining philosopher's problem and its solution. (10M)
OR
- 14 a) Discuss interprocess communication with the help of communication models. (5M)
b) Elaborate reader-writer problem. (5M)
- 15 Analyze in detail the concept of Deadlock with relevant examples to explain its types. (10M)

OR

- 16 Write a short note on a) hierarchical paging b) hashed page table (10M)
- 17 Explain various page replacement algorithms with examples and evaluate them. (10M)
- OR
- 18 a) Illustrate the concept of copy on write. (5M)
b) Explain the concept of virtual memory on windows. (5M)
- 19 a) Explain the access methods of files. (5M)
b) Briefly outline the directory overview. (5M)
- OR
- 20 Elaborate on the implementation of Access Matrix, Access Control and Access Rights revocation. (10M)