



R18 Regulation

Subject code:205DE

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, December 2024

OPERATING SYSTEMS

(ECE)

Maximum Marks: 70

Date:06.01.2025

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 which carries 10M.
 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)		CO	Bloom Tx
1	Define an operating system.	1	L1
2	Outline the objectives of an Operating System.	1	L1
3	How parameters can be passed to system calls?	2	L1
4	Define Thread.	2	L1
5	Distinguish between I/O bound process and CPU bound process.	3	L1
6	Define hit ratio	3	L1
7	State FIFO page replacement policy	4	L1
8	How can we say that a process is thrashing?	4	L1
9	Define access right	5	L1
10	How the access matrix implemented.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	What is a System call? Explain the various types of system calls provided by an operating system. [10M]	1	L2
OR			
12	Demonstrate the dual mode operation in OS with a neat block diagram. [10M]	1	L2
13	Explain the following A)Scheduling Queues [5M] B)Context switching [5M]	2	L2
OR			
14	Explain critical section problem & what is software based solution to it? Explain. [10M]	2	L2
15	A) Explain in detail about resource allocation graph with example. [5M] B) describe about deadlock prevention. [5M]	3	L2
OR			
16	A) Distinguish between page table and inverted page table? [5M] B) Explain about fragmentation. [5M]	3	L2

17	Consider the following page reference string. [10M] 7,0,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0 Assuming three frames, how many page faults would occur in each of the following cases? i. FIFO ii. Optimal iii. LRU Note that initially all frames are empty.	4	L2
	OR		
18	Explain briefly about paging with neat diagram. [10M]	4	L2
19	A) List the different file system allocation methods? [5M] B) Define protection in file system. How it is implemented? [5M]	5	L2
	OR		
20	Explain: A) Capability based system. [5M] B) Language based protection. [5M]	5	L2