



R18 Regulation

Subject code: 2P5EA & 2P5FA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, July 2024

OPERATING SYSTEMS

(Common to CSE & IT)

Maximum Marks: 70

Date:19.07.2024 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	Define system call.		1	L1
3	Write about CPU scheduling		2	L1
4	Define Preemptive scheduling.		2	L1
5	Define methods for handling deadlocks.		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)		
11	a) Define an operating system? State and explain the basic functions or services of an operating system? [5M] b) Explain the differences between multiprogramming and time-sharing systems? [5M]		1	L2
OR				
12	a) Is OS is a resource manager? If so justify your answer [5M] b) Discuss about operating system structure based on modules. [5M]		1	L2
13	Explain the following [5+5M] a) Scheduling Queues b) Context switching		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) Distinguish between internal and external fragmentation? [5M]	3	L2
17	Explain thrashing, what are the causes of thrashing & explain the working set model for the same. [10M]	4	L2
	OR		
18	Explain page replacement algorithms. [10M]	4	L2
19	Briefly explain about the concept of files. [10M]	5	L2
	OR		
20	a) Give overview of mass storage structure in detail. [5M] b) Describe about efficiency and performance of secondary storage. [5M]	5	L2