



R18 Regulation

Subject code:2P5FA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, December 2024

OPERATING SYSTEMS

(IT)

Maximum Marks: 70

Date:23.12.2024

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	List the various OS components.	1	L1
3	Define short term scheduler.	2	L1
4	Define Preemptive scheduling.	2	L1
5	Define 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 principles of protection.	5	L1
10	How the access matrix implemented.	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		CO	Bloom Tx
11	State and explain the basic functions or services of an operating system. [10M]	1	L2
OR			
12	A) Is OS is a resource manager? If so justify your answer. [5M] B) Discuss Muti Programmed Systems. [5M]	1	L2
13	Define Semaphore? Explain the method of application of semaphore for process synchronization. [10M]	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 the following file concepts. a) File attributes b) File types c) Internal file structure	[4+3+3]M	4	L2
	OR			
18	A) Summarize the concept of demand paging. B) Write a short note on file operations.	[5M] [5M]	4	L2
19	Explain about allocation methods in the file systems implementation.	[10M]	5	L2
	OR			
20	Explain: A) Capability based system. B) Language based protection.	[5M] [5M]	5	L2