R18 Regulation *Subject code:2P5FA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, May 2025

OPERATING SYSTEM

(IT)

Maximum Marks: 70 Date: 17.06.2025 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.
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)		Marks	CO	BTL
1	What is an operating system?	2M	1	L1
2	What do you mean by system call?	2M	1	L1
3	What is a process?	2M	2	L1
4	What is the role of dispatcher?	2M	2	L1
5	What is resource allocation graph?	2M	3	L1
6	What do you mean by Best fit?	2M	3	L1
7	What is logical address space and physical address space?	2M	4	L1
8	What is a file?	2M	4	L1
9	Define UFD and MFD?	2M	5	L1
10	Write about goals of protection?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Explain briefly about system calls and how system call is used. b) Explain different operations performed by the operating system.	5M 5M	1	L2
	OR			
12	a) Explain about computer system architecture. b) Explain about system programs.	5M 5M	1	L2
13	a) Explain about process states and process control block. b) Explain about Multiple processor scheduling.	5M 5M	2	L2
	OR			
14	Explain the concept of semaphores. Illustrate with an example.	10M	2	L2
15	Explain banker's algorithm for deadlock avoidance with an example.	10M	3	L2
	OR			
16	Explain a) Paging b) Segmentation	(5+5)M	3	L2
17	Explain a) Copy on write b) Thrashing	(5+5)M	4	L2
	OR			
18	Explain briefly about directory structure.	10M	4	L2
19	Explain briefly about free space management.	10M	5	L2
	OR			
20	a) What is access matrix? What are various methods to implement it? b) Explain about capability-based protection system.	5M 5M	5	L2