R18 Regulation *Subject code:2O7DB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VII Semester Supplementary Examinations, May 2026

OPERATING SYSTEM

(ECE)

Maximum Marks: 70 Date: 07.05.2026 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 a System Call?	2M	1	L1
3	What is a Process?	2M	2	L1
4	What is Independent process?	2M	2	L1
5	Define Deadlock?	2M	3	L1
6	Define Rollback in deadlock recovery.	2M	3	L1
7	Define Lazy swapper.	2M	4	L1
8	What is a Page Fault?	2M	4	L1
9	What is Sequential access method of files?	2M	5	L1
10	What are the various file accessing methods?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Contrast user view and system view of an operating system.	10M	1	L2
	OR			
12	Explain the services of Operating system.	10M	1	L2
13	What is Scheduling? Analyze FCFS scheduling algorithm with example.	10M	2	L2
	OR			
14	Consider the following set of processes with the length of the CPU burst time given in milliseconds. Process Burst time P1 24 P2 3 P3 3 The processes are assumed to have arrived in the order p1, p2, p3 all at time 0. Draw Gantt charts illustrating the execution of these processes using Round Robin scheduling. (quantum=4 milliseconds).	10M	2	L2

15	a) Write the necessary conditions for a deadlock situation to arise. b) Analyze the ways to be followed to prevent deadlock.	5M 5M	3	L2
	OR			
16	Explain the concept of Swapping with example.	10M	3	L2
17	Consider the following page reference string 7,0,1,2,0,3,0,4,2,3,0,3,2,1,2,0,1,7,0,1 Assuming three frames, compare how many page faults would occur in each of the following cases? i) FIFO ii) Optimal	10M	4	L2
	OR			
18	Discuss the concept and performance of demand paging.	10M	4	L2
19	Contrast the approaches of how free space is managed by operating system.	10M	5	L2
	OR			
20	Analyze the following with relevant diagrams: a) Single level directory structure b) Tree structured directory structure	5M 5M	5	L2