R20 Regulation *Subject code:3O8BB*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech VIII Semester Supplementary Examinations, May 2026

OPERATING SYSTEMS

(EEE)

Maximum Marks: 70 Date: 04.05.2026 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 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)		Marks	CO	BTL
1	Define an operating system.	2M	1	BL2
2	Define system call.	2M	1	BL1
3	Define scheduler.	2M	2	BL1
4	Define semaphore.	2M	2	BL2
5	Define segmentation.	2M	3	BL2
6	Define page frame.	2M	3	BL1
7	State FIFO page replacement policy.	2M	4	BL1
8	How can we say that a process is thrashing?	2M	4	BL1
9	Define access right.	2M	5	BL1
10	How the access matrix implemented.	2M	5	BL2

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
11	a) Discuss the user view and system view of operating system. b) Explain about OS interfaces.	5M 5M	1	BL2
	OR			
12	Explain about computer system architecture.	10M	1	BL2
13	Explain the following a) Scheduling Queues b) Context switching	5M 5M	2	BL2
	OR			
14	Explain critical section problem & what is software based solution to it.	10M	2	BL2
15	a) Explain the various methods which we apply for recovery from deadlocks. b) Explain about swapping.	5M 5M	3	BL2
	OR			
16	a) How the memory protection is assured in paging environment? b) Describe about Segmentation.	5M 5M	3	BL2

17	Consider the following page reference string. 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.	5M 5M	4	BL2
	OR			
18	a) Summarize the concept of demand paging. b) Write a short note on performance of demand paging.	5M 5M	4	BL2
19	Briefly explain about the concept of files.	10M	5	BL2
	OR			
20	a) Give overview of mass storage structure in detail. b) Describe about efficiency and performance of secondary storage.	5M 5M	5	BL2