MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

MLRS

II B.Tech I Sem Supply End Examination, July-2022
Operating Systems
(CSM & CSD)

Time: 3 Hours.   Max. Marks: 70

Note: 1. Question paper consists: Part-A and Part-B.
    2. In Part – A, answer all questions which carries 20 marks.
    3. In Part – B, answer any one question from each unit.
        Each question carries 10 marks and may have a, b as sub questions.

PART- A
                                                    (10*2 Marks = 20 Marks)

1.	a)	Explain the term multiprogramming.	2M	CO1	BL4
	b)	What is a parallel system?	2M	CO1	BL1
	c)	What is a process control block?	2M	CO2	BL1
	d)	What is meant by cooperating process?	2M	CO2	BL1
	e)	What is Resource-Allocation graph?	2M	CO3	BL1
	f)	What is critical section problem?	2M	CO3	BL1
	g)	What is a logical address space and a physical address space?	2M	CO4	BL1
	h)	What is a translation look-aside buffer(TLB)?	2M	CO4	BL1
	i)	Give an example of free-space bit map.	2M	CO5	BL1
	j)	What is an access-control list?	2M	CO5	BL1

PART- B
                                                    (10*5 Marks = 50 Marks)

2	a)	Explain the essential properties of time-shared operating systems.	5M	CO1	BL4
	b)	Discuss briefly about distributed systems.	5M	CO1	BL2

OR

3	List and explain briefly the functions provided by operating system services that are helpful to the user and system.	10M	CO1	BL4

4	a)	What is meant by CPU scheduling? Explain the criteria for comparing CPU scheduling algorithms.	5M	CO2	BL4
	b)	Explain SJF scheduling with suitable example.	5M	CO2	BL4

OR

5	What are the objectives of process schedulers? What are different types of schedulers? Explain queueing-diagram representation of process scheduling.	10M	CO2	BL1

6	a)	Explain the different options for breaking a deadlock.	5M	CO3	BL4
	b)	Explain about IPC between processes on different systems using shared memory.	5M	CO3	B4L

OR

7		What is the critical section problem? Explain the hardware and software techniques for synchronization?	10M	CO3	BL4

8	a)	Discuss the hardware support required to support simple paging.	5M	CO4	BL2
	b)	Explain about FIFO page replacement algorithm.	5M	CO4	BL4

OR

9	Explain the concept of demand paging in detail.	10M	CO4	BL4

10	a)	Discuss about the linked allocation method of allocating disk space.	5M	CO5	BL2
	b)	Discuss briefly the different file access methods.	5M	CO5	BL2

OR

11	Discuss about the read and write system calls.	10M	CO5	BL2

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