Hall Ticket No.: ☐☐☐☐☐☐☐☐☐☐

SRIT R20

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY
(AUTONOMOUS)
III B. Tech I Sem – Semester End Examinations – Regular – Dec 2022
OPERATING SYSTEMS
[R204GA05503]
(Computer Science and Engineering)

Time: 3 hours   **Max. Marks: 60**

		PART-A (Answer the following, 5 X 2 = 10 Marks)	Marks	CO	BL
1	a)	What is virtualization?	[2M]	CO1	L1
	b)	What is the use of shared memory systems?	[2M]	CO1	L1
	c)	What is paging in memory management?	[2M]	CO1	L1
	d)	What is the use of RAID structure?	[2M]	CO1	L2
	e)	Define Malware.	[2M]	CO1	L1
		PART-B (Answer all five units, 5 X 10 = 50 Marks)			
		UNIT-1			
2	a)	What is the difference between Multitasking and Multiprogramming? Discuss.	[5M]	CO1	L2
	b)	What are the different ways of the user interfacing with the Operating System? Discuss.	[5M]	CO2	L2
		OR			
3	a)	What are the different resources managed by Operating System? Briefly discuss.	[5M]	CO1	L2
	b)	Discuss the different system services supported for program development.	[5M]	CO2	L2
		UNIT-2			
4	a)	With the help of a state diagram Illustrate the process states.	[5M]	CO3	L2
	b)	Illustrate critical section problem with suitable example.	[5M]	CO3	L2
		OR			
5	a)	What is CPU Scheduling? Explain any one scheduling algorithm.	[5M]	CO3	L2
	b)	Explain how Semaphores is implemented in IPC.	[5M]	CO3	L2
		UNIT-3			
6	a)	Illustrate swapping with a suitable diagram.	[5M]	CO4	L2
	b)	Explain the ways of handling the Deadlocks.	[5M]	CO4	L2
		OR			
7	a)	What is Thrashing? Discuss the possible causes for thrashing.	[5M]	CO4	L2
	b)	With an example explain LRU Page Replacement Algorithm.	[5M]	CO4	L3
		UNIT-4			
8	a)	Illustrate any one disk scheduling algorithm with an example.	[5M]	CO5	L3
	b)	Show how I/O system is designed in the operating system.	[5M]	CO5	L2
		OR			
9	a)	Discuss the purpose of different levels in RAID structure.	[5M]	CO5	L2
	b)	Briefly discuss the different access methods supported in files.	[5M]	CO5	L2

		UNIT-5			
10	a)	Discuss the kind of system threats encountered.	[5M]	CO6	L2
	b)	Illustrate the implementation of access matrix.	[5M]	CO6	L2
		OR			
11	a)	How Cryptography as a Security tool will protect the system? Discuss.	[5M]	CO6	L2
	b)	Discuss the different methods used by attackers to breach security.	[5M]	CO6	L2

*CO refers the Course Outcome (CO1, CO2, CO3, CO4, CO5 and CO6)

*BL refers the Blooms Level (L1, L2, L3, L4, L5, L6)

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