SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY::ANANTHAPURAMU

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Assignment-I

Course Title:	**Operating Systems**				**Course Code:**	**R204GA05503**
Class & Sem:	**III B. Tech I Sem**				**Regulations:**	**SRIT R20**
Course Structure:	**Theory**	**Tutorial**	**Lab**	**Credits**	**Core/Elective:**	**Core**
	3	**1**		**3**		
Instructor 1:	**Mr. M. Narasimhulu**			**Instructor 2:**		

Assignment Questions: **Academic Year: 2022-23**

Q. No.	Questions	Marks	CO	Cognitive Level
	Unit-I			
1	What is operating system? Describe multiprogramming and Multi-tasking systems.	2	CO1	Understand
2	Explain different operations performed by the operating system.	2	CO1	Understand
	Unit-II			
3	Construct a memory layout diagram for a C Program.	2	CO2	Apply
4	Construct producer-consumer problem with a suitable example.	2	CO3	Apply
	Unit-III			
5	Given page reference string:1,2,3,2,1,5,2,1,6,2,5,6,3,1,3,6,1,2,4,3. Compute the number of page faults for LRU, FIFO and Optimal page replacement algorithm with frame size=4.	2	CO4	Apply

- Submit the Assignment to the instructor on or **before 25-11-2022.**
- Last date for submitting Assignment-1: **25-11-2022**

SRINIVASA RAMANUJAN INSTITUTE OF TECHNOLOGY::ANANTHAPURAMU

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Assignment-II

Course Title:	**Operating Systems**				**Course Code:**	**R204GA05503**
Class & Sem:	**III B. Tech I Sem**				**Regulations:**	**SRIT R20**
Course Structure:	**Theory**	**Tutorial**	**Lab**	**Credits**	**Core/Elective:**	**Core**
	3	**1**		**3**		
Instructor 1:	**Mr. M. Narasimhulu**			**Instructor 2:**		

Assignment Questions: **Academic Year: 2022-23**

Q. No.	**Questions**	**Marks**	**CO**	**Cognitive Level**
	Unit-III			
1	A system has four processes and five resources. The current allocation and maximum needs are as follows: Allocated Maximum Process A 1 0 2 1 1 1 1 2 1 3 Process B 2 0 1 1 0 2 2 2 1 0 Process C 1 1 0 1 0 2 1 3 1 0 Process D 1 1 1 1 0 1 1 2 2 1 Find the minimum Available matrix that makes the system in safe state.	2	CO3	Apply
	Unit-IV			
2	Explain the different Disk scheduling algorithms with their comparisons.	2	CO5	Understand
3	Suppose that a disk drive has 5000 cylinders, numbered 0 to 4999. The current head position is at cylinder 143. The queue of pending requests is: 86, 1470, 913, 1774, 948, 1509, 1022, 1750, 130. What is the total distance that the disk arm moves to satisfy all the pending requests for each of the following Disk scheduling algorithms? a) SSTF b) SCAN	2	CO5	Apply
	Unit-V			
4	Illustrate various access matrix implementation techniques.	2	CO6	Understand
5	Illustrate encryption methods with suitable scenarios.	2	CO6	Understand

- Submit the Assignment to the instructor on or **before 11-12-2022.**
- Last date for submitting Assignment-2: **11-12-2022**