

B.Tech - Odd Sem : Semester in Exam-I
Academic Year:2023-2024
22CS2104R - OPERATING SYSTEMS
Set No: 1

Time:

Max.Marks: 50

S.NO Answer All Questions

1.	Answer All the Questions		12Marks	CO1	3	2
1.A.	List out any 10 Unix Commands with explanation.		2Marks	CO1	3	2
1.B.	Give Types of operating systems with its advantages.		2Marks	CO1	3	2
1.C.	Generalize Direct Execution.		2Marks	CO1	3	2
1.D.	Generalize Virtual Memory.		2Marks	CO2	3	2
1.E.	Summarize Free Space Management.		2Marks	CO2	3	2
1.F.	List out pros & cons of Segmentation.		2Marks	CO2	3	2
2.	Answer All Questions		16Marks	CO2	3	2
2.A.	Write down in detail about Process API along with Process System call fork ().		4Marks	CO1	3	2
2.B.	Discuss in detail Multi-Level Feedback.		4Marks	CO1	3	2
2.C.	Discuss in detail Translation Look Aside Buffer.		4Marks	CO2	3	2
2.D.	Explain in detail Trashing and Causes for Trashing?		4Marks	CO2	3	2
3.	Answer Questions 3A and 3B	choice Q-4	11Marks	CO1	3	2
3.A.	Explain in detail the System Calls in Unix Operating system		5Marks	CO1	3	2
3.B.	Calculate the Average Wait Time and Turn Around Time using Round Robin Algorithm, for Four Processes p1 to p4, where Burst Time is 5ms, 4ms, 2ms, 1ms and Arrival Time is 0ms, 1ms, 2ms and 4ms where the Time Quantum is 2.		6Marks	CO1	3	3
4.	Answer Questions 4A and 4B		11Marks	CO1	3	2
4.A.	Explain Lottery Scheduling Decision Code with an example.		5Marks	CO1	3	2
4.B.	Consider 5 processes p1 to p5 where arrival time is 0,1,2,6,12 and Execution time is 7,5,3,2,3. Calculate the Average Wait Time and Turn Around Time using First Come First Serve and Shortest Job First. Identify the differences between FCFS and SJF.		6Marks	CO1	3	3
5.	Answer the Questions 5A and 5B	choice Q-6	11Marks	CO2	3	3
5.A.	Identify the roles and compare segmentation with paging in the operating systems.		5Marks	CO2	3	3

5.B.	Consider a reference string 5 6 7 8 5 6 7 8 5 6 7 8 9 0 4 3 for the memory with 4 frames and with 3 frames. find the page faults with FIFO algorithm.	6Marks	CO2 3	3
6.	Answer the Questions 6A and 6B Calculate the Page fault with the Optimal Page replacement algorithm and FIFO Page Replacement	11Marks	CO2 3	3
6.A.	Algorithm with reference string 1 2 3 2 5 6 3 4 6 3 4 6 3 7 3 1 5 3 6 3 4 2 4 3 4 5 1 Assume that the memory size is four frames.	5Marks	CO2 3	3
6.B.	Identify the roles of Virtual Memory, Swapping, paging and Demand Paging in operating system.	6Marks	CO2 3	3