



REGISTRATION NUMBER

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SRINIX COLLEGE OF ENGINEERING

2nd INTERNAL EXAMINATION 2021-22

Sub –OS

5TH -SEM

Branch - CSE

Full marks- 100

Time – 2.30hrs

Answer all questions (Part – A)

(2 X 10 =20)

1. What do you mean by Operating System?
2. What do you mean by Thread in OS?
3. What do you mean by Rotational Latency?
4. What are the disadvantages of SSTF disk scheduling?
5. What are the disadvantages of Contiguous memory allocation?
6. What is the Hold-and Wait condition for deadlock?
7. What do you mean by Positioning Time?
8. What do you mean by Scalability?
9. What do you mean by Sequential access of a file?
10. What are the disadvantages of SJF scheduling?

Answer any eight questions (Part – B)

(6×8=48)

1. Why the algorithm's name is Banker's Algorithm? What is the difference between Deadlock Prevention and Deadlock Avoidance in an operating system?
2. Explain virtual memory with its advantages and disadvantages.
3. Explain LRU (Least Recently Used) page replacement algorithm with an example.
4. Consider the set of 5 processes whose arrival time and burst time are given below- If the CPU scheduling policy is **SSTF**; calculate the average waiting time and average turnaround time.

Process id	Arrival Time	Burst Time
P1	3	4
P2	5	3
P3	0	2
P4	5	1
P5	4	3

5. Explain Semaphore in Process Synchronization.
6. Explain with advantages and Drawbacks: a) contiguous allocation &b) linked list Allocation.
7. What is system Call? How it is handled by an OS?
8. What is Linux file system? Explain features of Linux file system.
9. Explain i) Boot block ii) Bad Block
10. What is distributed file system? Explain different features of DFS.

Answer any two questions (Part – C)

(16 x 2 = 32)

1. . Explain Different types of operating System. Explain different functions performed by operating system.

2. Suppose the orders of requests are 70, 140, 50, 125, 30, 25, 160, 30, 55,68, 80 and the initial position of the Read-Write head is 60.

Apply i) FCFS, ii) SCAN, iii) SSTF and iv) CLOOK and calculate Seek time for each scheduling algorithm.

3. (a) Consider following processes and calculate average turnaround time, average waiting time and throughput using priority scheduling algorithm

Processes	CPU Burst time	priority
P1	6	2
P2	12	4
P3	1	5
P4	3	1
P5	4	3

(b) What do you mean by Distributed Operating System? Explain its advantages and disadvantages. Explain characteristics of Distributed Operating System.