

SEC-8

- ① What are the various scheduling criteria for CPU scheduling? Define S-SCAN and C-SCAN algorithm.

Scheduling Criteria :-

1) CPU utilization :-

a) CPU utilization is the average fraction of time, during which the processor is busy.

b) The load on the system affects the level of utilization that can be achieved.

2) Throughput :-

a) Throughput refers to the amount of work completed in a unit of time.

b) The number of processes the system can execute in a period of time.

3) Waiting time :-

a) The average period of time a process spends waiting.

4) Turn around time :-
a) The interval from the time of submission of a process to the time of completion is the turnaround time.

5) Response time :-

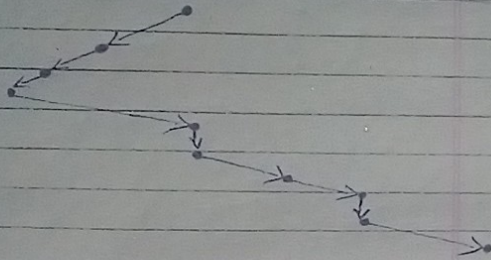
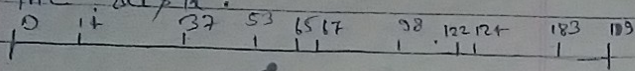
a) Response time is the time from the submission of a request until the first response is produced.

S-SCAN Scheduling :-

1) In the SSCAN scheduling algorithm, the disk arm starts at one end of the disk and move towards the other end, servicing request as it reaches each cylinder towards the other end.

2) At the other end, the direction of head movement is reversed, and serving continuously.

3) The head continuously scans back and forth across the disk.



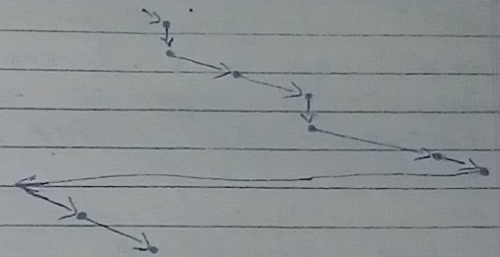
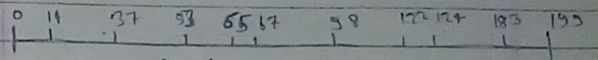
S-SCAN disk Scheduling

C-SCAN scheduling :-

1) Circular Scan (C-Scan) Scheduling is a variant of SCAN designed to provide a more uniform wait time.

2) Like SSCAN, C-SCAN moves the head from one end of the disk to the other, servicing requests along the way.

3) When the head reaches the other end, however it immediately returns to the beginning of the disk without servicing any request on the return trip.



C-Scan disk scheduling