

Operating Systems Sheet- Arsh Goyal with Notes

Watch this video for complete details :

Questions List

1. What happens when you press the ON button on your laptop?
2. What is Operating System ? Why do we need it ?
3. Different Types of Operating Systems ?
4. Major Differences :

| | |
|-----------------|------------------|
| RAM | ROM |
| Thread | Process |
| SRAM | DRAM |
| PROM | EPROM / EEPROM |
| Multiprocessing | Multiprogramming |
| Multitasking | MultiThreading |

5. Difference between a Process and Thread with example.
6. What is a Process and Thread ?
7. Terms in Process Scheduling - Arrival Time , Completion Time , Burst Time, Turn Around Time , Waiting Time (WT)
8. What is fork()? User and Kernal Threads.
9. Scheduling Algorithms :
 - First Come First Serve (FCFS)
 - Shortest Job First (SJF)
 - Shortest Remaining Time First (SRTF)
 - Round Robin (RR) Scheduling
 - Priority Based scheduling (Non Preemptive)
 - Highest Response Ratio Next (HRRN)
 - Multilevel Queue Scheduling (MLQ)
10. What is Critical Section Problem and Race Around Condition ?
11. Mutual Exclusion and Bounded Waiting in Operating Systems?
12. What are Semaphores ? Types of Semaphores ?
13. What is Mutex ?
14. Differences between Mutex and Semaphore . Use Cases as well.
15. Deadlock and necessary conditions for deadlock to happen? Detailed.
16. How to handle a deadlock?
17. Banker's Algorithm and its use case.
18. Memory Management
19. Partition Schemes - Best Fit , First Fit , Worst Fit
20. What is Paging and its need ?
21. What is Segmentation and its need ?
22. Difference between Paging and Segmentation ?
23. Why does a page fault occur?
24. Major Page Replacement Algorithms

25. Definitions : Logical address space , LBA , Spooling , Starvation , Aging ,Virtual Memory

26. FIFO

Optimal Page Replacement Algorithm

Least Recently Used (Along with Code) - VV Imp.

27.Disk Scheduling and Terms associated - Seek Time , Rotational Latency, Transfer Time , Disk Access Time ,Disk Response Time.

28. Disk Scheduling Algorithms - FCFS , SSTF , SCAN , CSCAN , LOOK , CLOOK

29. What is Thrashing ?

Resources to Prepare :

Detailed Book Recommendation : GALVIN - Wiley

1.Bed Time Stories with OS :

<https://drive.google.com/file/d/1BMtW2e2Lm-ngAhAssicyN4IFq5InLJ6j/view?usp=sharing>

2. GFG Last Minute Notes :

<https://www.geeksforgeeks.org/last-minute-notes-operating-systems/>

3. Video PlayList :

<https://youtube.com/playlist?list=PLxCzCOWd7aiGz9donHRR9l3Mwn6XdP8p>

4. InterviewBit Document :

<https://drive.google.com/file/d/1-2aR5Jq1YVAB8hrrsdFxTJqGExgop8Ms/view>

5. Handwritten notes for College Exams :

<https://drive.google.com/file/d/1tuK9UFCXtVDyfYyTKzhOcOoTt8wf2H5y/view?usp=sharing>

https://drive.google.com/file/d/1Kk_LC3EcOdDfRGulZ8Ow1ocJa5ejBI9D/view?usp=sharing