**Operating System**:

1. What is the main purpose of an operating system? Discuss different types?
2. What is a socket, kernel and monolithic kernel ?
3. Difference between process and program and thread? Different types of process.
4. Define virtual memory, thrashing, threads.
5. What is RAID ? Different types.
6. What is a deadlock ? Different conditions to achieve a deadlock.
7. What is fragmentation? Types of fragmentation.
8. What is spooling ?
9. What is semaphore and mutex (Differences might be asked)? Define Binary semaphore.
10. Belady’s Anomaly
11. Starving and Aging in OS
12. Why does trashing occur?
13. What is paging and why do we need it?
14. Demand Paging, Segmentation
15. Real Time Operating System, types of RTOS.
16. Difference between main memory and secondary memory.
17. Dynamic Binding
18. FCFS Scheduling
19. SJF Scheduling
20. SRTF Scheduling
21. LRTF Scheduling
22. Priority Scheduling
23. Round Robin Scheduling
24. Producer Consumer Problem
25. Banker’s Algorithm
26. Explain Cache
27. Diff between direct mapping and associative mapping
28. Diff between multitasking and multiprocessing