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| 1 | What is a process?  A process is an active program i.e a program that is under execution. |  |
| 2 | What are the states of a process?  New,ready,running,waiting,terminating |  |
| 3 | What is semaphore?  System Semaphores are **integer variables** that are used to solve the critical section problem by using two atomic operation |  |
| 4 | What is context switching?  context switch is the process of storing the state of a process or thread, so that it can be restored and resume execution at a later point. |  |
| 5 | What is a thread? Basic unit of process |  |
| 6 | What is process synchronization?  Process Synchronization is the task of coordinating the execution of processes in a way that no two processes can have access to the same shared data and resources. |  |
| 7 | Explain the meaning of mutex.   A mutex allows multiple threads for sharing the same resource. |  |
| 8 | What are the disadvantages of context switching?  it requires some time for **context** **switching** |  |
| 9 | When is a system in safe state?  if there exists an **allocation sequence that allows the processes to finish executing**. |  |
| 10 | What is an idle thread?  Idle Thread **(Waiting for Work)** |  |
| 11 | What is the difference between process and program?  A program is an executable file which contains a certain set of instructions written to complete the specific job on your computer.  A process is an execution of any specific program |  |
| 12 | What is Banker's algorithm?  The **banker**’**s** **algorithm** is a resource allocation and deadlock avoidance **algorithm** that tests for safety by simulating the allocation for predetermined maximum possible amounts of all resources, then makes an “s-state” |  |
| 13 | What is a binary Semaphore?z |  |
| 14 | What are the advantages of multithreaded programming? |  |
| 15 | What is a P-thread? |  |
| 16 | What is critical section problem? |  |
| 17 | What is bounded-buffer problem? |  |
| 18 | What is dining philosophers’ problem? |  |
| 19 | What is readers-writers problem? |  |
| 20 | What is busy waiting? |  |
| 21 | Name various scheduling queues? |  |
| 22 | What are co-operating processes? |  |
| 23 | What are types of threads? |  |
| 24 | Which category the java thread do fall in? |  |
| 25 | What are the deadlock avoidance algorithms? |  |
| 26 | Give a non-computer example of preemptive and non-preemptive scheduling? | |
| 27 | What is Precedence Graph |  |
| 28 | What are the properties of Precedence Graph |  |
| 29 | What are the different kinds of operations that are possible on semaphore? | |
| 30 | Explain about recovery from deadlock? |  |
| 31 | Describe the differences among short-term, mediumterm, and long term scheduling |  |
| 32 | Explain scheduling queues. |  |
| 33 | Explain the scheduling criteria |  |
| 34 | Explain FCFS scheduling algorithm with example. |  |
| 35 | Explain SJF scheduling algorithm with example |  |
| 36 | Explain Priority scheduling algorithm with example |  |
| 37 | Explain Round Robin scheduling algorithm with example |  |
| 38 | What is starvation? Explain with example. |  |
| 39 | What is Scheduler? |  |
| 40 | Differentiate with example Preemptive and non preemptive scheduling |  |
| 41 | Differentiate with example I/O bound and CPU bound |  |
| 42 | What is the criterion used to select the time quantum in case of round-robin scheduling algorithm? Explain it with a suitable example. |  |
| 43 | Explain multilevel feedback queue scheduling with example. |  |
| 44 | Explain the role of long term scheduler in O.S |  |
| 45 | Explain the role of medium term scheduler in O.S |  |
| 46 | Explain the role of short tem scheduler in O.S |  |
| 47 | Which of the process scheduling algorithm may lead to starvation |  |
| 48 | Define CPU utilization |  |
| 49 | Define throughput |  |
| 50 | Define turnaround time |  |
| 51 | Define waiting time |  |
| 52 | Define response time |  |
| 53 | Give difference between Job-scheduling & CPU-scheduling. |  |
| 54 | What is a dispatcher? |  |
| 55 | What is deadlock? |  |
| 56 | What are different methods for handling deadlocks? |  |
| 57 | What are necessary conditions for deadlocks? |  |
| 58 | Explain about Deadlock Prevention |  |
| 59 | Explain about Deadlock Avoidance |  |
| 60 | Explain about resource allocation graph(RAG)? |  |