OSC

1. The number of processes completed per unit time is known as \_\_\_\_\_\_\_\_\_\_  
   a) Output  
   **b) Throughput**  
   c) Efficiency  
   d) Capacity
2. The state of a process is defined by:  
   a) the final activity of the process  
   b) the activity just executed by the process  
   c) the activity to next be executed by the process  
   **d) the current activity of the process**
3. Which of the following is not the state of a process?  
   a) New  
   **b) Old**  
   c) Waiting  
   d) Running
4. The Process Control Block is:  
   a) Process type variable  
   **b) Data Structure**  
   c) A secondary storage section  
   d) A Block in memory
5. The entry of all the PCBs of the current processes is in:  
   a) Process Register  
   b) Program Counter  
   **c) Process Table**  
   d) Process Unit
6. The degree of multi-programming is:  
   a) the number of processes executed per unit time  
   b) the number of processes in the ready queue  
   c) the number of processes in the I/O queue  
   **d) the number of processes in memory**
7. The objective of multi-programming is to :  
   **a) Have some process running at all times**b) Have multiple programs waiting in a queue ready to run  
   c) To minimize CPU utilization  
   d) None of the mentioned
8. When the process issues an I/O request :  
   **a) It is placed in an I/O queue**  
   b) It is placed in a waiting queue  
   c) It is placed in the ready queue  
   d) It is placed in the Job queue
9. When a process terminates :  
   **a) It is removed from all queues**  
   b) It is removed from all, but the job queue  
   c) Its process control block is de-allocated  
   d) Its process control block is never de-allocated
10. What is a long-term scheduler ?  
    **a) It selects which process has to be brought into the ready queue**  
    b) It selects which process has to be executed next and allocates CPU  
    c) It selects which process to remove from memory by swapping  
    d) None of the mentioned
11. If all processes I/O bound, the ready queue will almost always be \_\_\_\_\_\_ and the Short term Scheduler will have a \_\_\_\_\_\_ to do.  
    a) full,little  
    b) full,lot  
    **c) empty,little**  
    d) empty,lot
12. What is a medium-term scheduler ?  
    a) It selects which process has to be brought into the ready queue  
    b) It selects which process has to be executed next and allocates CPU  
    **c) It selects which process to remove from memory by swapping**  
    d) None of the mentioned
13. What is a short-term scheduler ?  
    a) It selects which process has to be brought into the ready queue  
    **b) It selects which process has to be executed next and allocates CPU**  
    c) It selects which process to remove from memory by swapping  
    d) None of the mentioned
14. The primary distinction between the short term scheduler and the long term scheduler is :  
    a) The length of their queues  
    b) The type of processes they schedule  
    **c) The frequency of their execution**  
    d) None of the mentioned
15. In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the :  
    a) Blocked state  
    **b) Ready state**  
    c) Suspended state  
    d) Terminated state
16. In a multi-programming environment :  
    a) the processor executes more than one process at a time  
    b) the programs are developed by more than one person  
    **c) more than one process resides in the memory**  
    d) a single user can execute many programs at the same time
17. Suppose that a process is in “Blocked” state waiting for some I/O service. When the service is completed, it goes to the :  
    a) Running state  
    **b) Ready state**  
    c) Suspended state  
    d) Terminated state
18. The context of a process in the PCB of a process does not contain :  
    a) the value of the CPU registers  
    b) the process state  
    c) memory-management information  
    **d) context switch time**
19. Which of the following need not necessarily be saved on a context switch between processes ?  
    a) General purpose registers  
    b) Translation look-aside buffer  
    c) Program counter  
    d) All of the mentioned
20. When several processes access the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called  
    a) dynamic condition b) race condition c) essential condition  
    d) critical condition
21. If a process is executing in its critical section, then no other processes can be executing in their critical section. This condition is called  
    **a) mutual exclusion**  
    b) critical exclusion  
    c) synchronous exclusion  
    d) asynchronous exclusion
22. Which one of the following is a synchronization tool?  
    a) thread  
    b) pipe  
    **c) semaphore**  
    d) socket
23. A semaphore is a shared integer variable  
    **a) that can not drop below zero**  
    b) that can not be more than zero  
    c) that can not drop below one  
    d) that can not be more than one
24. Mutual exclusion can be provided by the  
    a) mutex locks  
    b) binary semaphores  
    c) both mutex locks and binary semaphores  
    d) none of the mentioned
25. When high priority task is indirectly preempted by medium priority task effectively inverting the relative priority of the two tasks, the scenario is called  
    **a) priority inversion**  
    b) priority removal  
    c) priority exchange  
    d) priority modification
26. Process synchronization can be done on  
    a) hardware level  
    b) software level  
    **c) both hardware and software level**  
    d) none of the mentioned
27. A parent process calling \_\_\_\_\_ system call will be suspended until children processes terminate.  
    **a) wait**  
    b) fork  
    c) exit  
    d) exec
28. Cascading termination refers to termination of all child processes before the parent terminates \_\_\_\_\_\_  
    **a) Normally**  
    b) Abnormally  
    c) Normally or abnormally  
    d) None of the mentioned
29. With \_\_\_\_\_\_\_\_\_\_\_\_\_ only one process can execute at a time; meanwhile all other process are waiting for the processor. With \_\_\_\_\_\_\_\_\_\_\_\_\_\_ more than one process can be running simultaneously each on a different processor.  
    a) Multiprocessing, Multiprogramming  
    b) Multiprogramming, Uniprocessing  
    **c) Multiprogramming, Multiprocessing**  
    d) Uniprogramming, Multiprocessing
30. In UNIX, each process is identified by its :  
    a) Process Control Block b) Device Queue c) Process Identifier  
    d) None of the the mentioned\
31. In UNIX, the return value for the fork system call is \_\_\_\_\_ for the child process and \_\_\_\_\_ for the parent process.  
    a) A Negative integer, Zero  
    b) Zero, A Negative integer  
    **c) Zero, A nonzero integer**  
    d) A nonzero integer, Zero
32. The child process completes execution,but the parent keeps executing, then the child process is known as :  
    a) Orphan  
    **b) Zombie**  
    c) Body  
    d) Dead
33. Inter process communication :  
    a) allows processes to communicate and synchronize their actions when using the same address space  
    **b) allows processes to communicate and synchronize their actions without using the same address space**  
    c) allows the processes to only synchronize their actions without communication  
    d) none of the mentioned
34. Message passing system allows processes to :  
    **a) communicate with one another without resorting to shared data**  
    b) communicate with one another by resorting to shared data  
    c) share data  
    d) name the recipient or sender of the message
35. An IPC facility provides atleast two operations :  
    a) write & delete message  
    b) delete & receive message  
    c) send & delete message  
    **d) receive & send message**
36. The link between two processes P and Q to send and receive messages is called :  
    **a) communication link**b) message-passing link  
    c) synchronization link  
    d) all of the mentioned
37. Which module gives control of the CPU to the process selected by the short-term scheduler?  
    **a) dispatcher**  
    b) interrupt  
    c) scheduler  
    d) none of the mentioned
38. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called  
    a) job queue  
    **b) ready queue**  
    c) execution queue  
    d) process queue
39. The interval from the time of submission of a process to the time of completion is termed as  
    a) waiting time b) turnaround time c) response time d) throughput
40. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?  
    **a) first-come, first-served scheduling**  
    b) shortest job scheduling  
    c) priority scheduling  
    d) none of the mentioned
41. In priority scheduling algorithm  
    **a) CPU is allocated to the process with highest priority**  
    b) CPU is allocated to the process with lowest priority  
    c) Equal priority processes can not be scheduled  
    d) None of the mentioned
42. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of  
    a) all process  
    **b) currently running process**  
    c) parent process  
    d) init process
43. Time quantum is defined in  
    a) shortest job scheduling algorithm  
    **b) round robin scheduling algorithm**  
    c) priority scheduling algorithm  
    d) multilevel queue scheduling algorithm
44. In multilevel feedback scheduling algorithm  
    **a) a process can move to a different classified ready queue**  
    b) classification of ready queue is permanent  
    c) processes are not classified into groups  
    d) none of the mentioned
45. Which one of the following can not be scheduled by the kernel?  
    a) kernel level thread  
    **b) user level thread**  
    c) process  
    d) none of the mentioned
46. CPU scheduling is the basis of \_\_\_\_\_\_\_\_\_\_\_  
    a) multiprocessor systems  
    **b) multiprogramming operating systems**c) larger memory sized systems  
    d) none of the mentioned
47. With multiprogramming, \_\_\_\_\_\_ is used productively.  
    **a) time**  
    b) space  
    c) money  
    d) all of the mentioned
48. The two steps of a process execution are :  
    a) I/O & OS Burst  
    **b) CPU & I/O Burst**  
    c) Memory & I/O Burst  
    d) OS & Memory Burst
49. An I/O bound program will typically have :  
    a) a few very short CPU bursts  
    b) many very short I/O bursts  
    **c) many very short CPU bursts**  
    d) a few very short I/O bursts
50. A process is selected from the \_\_\_\_\_\_ queue by the \_\_\_\_\_\_\_\_ scheduler, to be executed.  
    a) blocked, short term  
    b) wait, long term  
    **c) ready, short term**  
    d) ready, long term
51. In the following cases non – preemptive scheduling occurs :  
    a) When a process switches from the running state to the ready state  
    **b) When a process goes from the running state to the waiting state**  
    c) When a process switches from the waiting state to the ready state  
    d) All of the mentioned
52. The switching of the CPU from one process or thread to another is called :  
    a) process switch  
    b) task switch  
    c) context switch  
    **d) all of the mentioned**
53. Dispatch latency is :  
    a) the speed of dispatching a process from running to the ready state  
    b) the time of dispatching a process from running to ready state and keeping the CPU idle  
    **c) the time to stop one process and start running another one**  
    d) none of the mentioned
54. Scheduling is done so as to :  
    **a) increase CPU utilization**  
    b) decrease CPU utilization  
    c) keep the CPU more idle  
    d) None of the mentioned
55. Scheduling is done so as to :  
    **a) increase the throughput**  
    b) decrease the throughput  
    c) increase the duration of a specific amount of work  
    d) None of the mentioned
56. Turnaround time is :  
    a) the total waiting time for a process to finish execution  
    b) the total time spent in the ready queue  
    c) the total time spent in the running queue  
    **d) the total time from the completion till the submission of a process**
57. Waiting time is :  
    a) the total time in the blocked and waiting queues  
    **b) the total time spent in the ready queue**  
    c) the total time spent in the running queue  
    d) the total time from the completion till the submission of a process\
58. Scheduling is done so as to :  
    a) increase the waiting time  
    b) keep the waiting time the same  
    **c) decrease the waiting time**  
    d) none of the mentioned
59. Response time is :  
    a) the total time taken from the submission time till the completion time  
    **b) the total time taken from the submission time till the first response is produced**  
    c) the total time taken from submission time till the response is output  
    d) none of the mentioned
60. Round robin scheduling falls under the category of :  
    a) Non preemptive scheduling  
    **b) Preemptive scheduling**  
    c) All of the mentioned  
    d) None of the mentioned
61. With round robin scheduling algorithm in a time shared system,  
    **a) using very large time slices converts it into First come First served scheduling algorithm**  
    b) using very small time slices converts it into First come First served scheduling algorithm  
    c) using extremely small time slices increases performance  
    d) using very small time slices converts it into Shortest Job First algorithm
62. The FIFO algorithm :  
    a) first executes the job that came in last in the queue  
    **b) first executes the job that came in first in the queue**  
    c) first executes the job that needs minimal processor  
    d) first executes the job that has maximum processor needs
63. The strategy of making processes that are logically runnable to be temporarily suspended is called :  
    a) Non preemptive scheduling  
    **b) Preemptive scheduling**c) Shortest job first  
    d) First come First served
64. 8. There are 10 different processes running on a workstation. Idle processes are waiting for an input event in the input queue. Busy processes are scheduled with the Round-Robin timesharing method. Which out of the following quantum times is the best value for small response times, if the processes have a short runtime, e.g. less than 10ms ?  
    **a) tQ = 15ms**  
    b) tQ = 40ms  
    c) tQ = 45ms  
    d) tQ = 50ms
65. Orders are processed in the sequence they arrive if \_\_\_\_\_\_\_ rule sequences the jobs.  
    a) earliest due date  
    b) slack time remaining  
    **c) first come, first served**  
    d) critical ratio
66. Which of the following algorithms tends to minimize the process flow time ?  
    a) First come First served  
    **b) Shortest Job First**c) Earliest Deadline First  
    d) Longest Job First
67. Under multiprogramming, turnaround time for short jobs is usually \_\_\_\_\_\_\_\_ and that for long jobs is slightly \_\_\_\_\_\_\_\_\_\_\_  
    a) Lengthened; Shortened  
    **b) Shortened; Lengthened**  
    c) Shortened; Shortened  
    d) Shortened; Unchanged
68. 12. Which of the following statements are true ? (GATE 2010)  
    I. Shortest remaining time first scheduling may cause starvation  
    II. Preemptive scheduling may cause starvation  
    III. Round robin is better than FCFS in terms of response time  
    a) I only  
    b) I and III only  
    c) II and III only  
    **d) I, II and III**