

Q3- Select the correct answer in each of the following:

1. Each process is represented in the operating system by a -----.
A- handler B- **PCB** C- kernel D- bootstrap
2. The _____ refers to the number of processes in memory.
A. **degree of multiprogramming** B. CPU scheduler C. long-term scheduler D. process count
3. The _____ scheduling algorithm is designed especially for time-sharing systems.
A. Multi-level Queue B. FCFS C. SJF D. **RR**
4. An address generated by a CPU is referred to as a _____.
A. post relocation register address B. MMU address C. **logical address** D. physical address
5. The processes that are residing in the main memory and are ready and waiting to execute are kept on a list called the _____.
A. Device Queue B. Waiting Queue C. **Ready Queue** D. Spooling Queue
6. Interrupt transfers control to the interrupt service routine generally, through the _____, which contains the addresses of all the service routines.
A. Device Queue B. dispatcher C. **interrupt vector** D. scheduler
7. Saving the state of the old process and loading the saved state for new process in order to transfer the control from one process to other process is called _____.
A. Thrashing B. dispatcher C. swapping D. **context switch**
8. A _____ is a software-generated interrupt caused either by an error or a user request.
A. system call B. interrupt handler C. **trap** D. interrupt vector
9. _____ schedulers are the job schedulers that select processes from the job queue and load them into memory for execution.
A. Short term B. Medium term C. **Long term** D. None of the mentioned
10. _____ is solution to external fragmentation problem which is to permit the logical address space of a process to be noncontiguous, thus allowing a process to be allocating physical memory wherever the latter is available.
A. Paging B. Segmentation C. **Both A and B** D. None of the mentioned
11. CPU scheduling decisions may take place when a process switches from _____ state.
A. Running to waiting B. running to ready C. waiting to ready D. **All the mentioned**
12. _____ is defined as the number of processes that complete their execution per time unit.
A. Turnaround time B. Response time C. **Throughput** D. Waiting Time
13. _____ is defined as the amount of time to execute a particular process.
A. **Turnaround time** B. Response time C. Throughput D. Waiting Time
14. _____ is defined as amount of time a process has been waiting in the ready queue.
A. Turnaround time B. Response time C. Throughput D. **Waiting Time**
15. _____ is defined as amount of time it takes from when a request was submitted until the first response is produced, not output.
A. Turnaround time B. **Response time** C. Throughput D. Waiting Time
16. When _____ is used, a small piece of code, stub, used to locate the appropriate memory-resident library routine.
A. Dynamic loading B. **Dynamic linking** C. paging D. All the mentioned
17. _____ is the space wasted inside of allocated memory blocks because of restriction on the allowed sizes of allocated blocks
A. **Internal fragmentation** B. Thrashing C. External fragmentation D. None of the mentioned
18. The two separate modes of operating in a system are _____ mode and _____ mode .
A. supervisor, system B. kernel, privileged C. physical, logical D. **user, kernel**
19. The list of processes waiting for a particular I/O device is called a(n) _____ queue.
A. standby B. interrupt C. **device** D. ready
20. Consider a logical address with a page size of 8 KB. How many bits must be used to represent the page offset in the logical address?
A. 10 B. 8 C. **13** D. 12
21. Consider a logical address with 18 bits used to represent an entry in a conventional page table. How many entries are in the conventional page table?

- A. 262144 B. 1024 C. 1048576 D. 18
22. Assume a system has a associated memory hit ratio of 90%. It requires 15 nanoseconds to access the associated memory, and 85 nanoseconds to access main memory. What is the effective memory access time in nanoseconds for this system?
- A. 108.5 B. 100 C. 22 D. 176.5
23. Given the logical address 0xAEF9 (in hexadecimal) with a page size of 256 bytes, what is the page number?
- A. 0xAE B. 0xF9 C. 0xA D. 0x00F9
24. _____ is the only large storage media that the CPU can access directly.
- A. registers B. Main memory C. Optical disks D. magnetic tapes