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Course Code: MCA-101

Course Name: Fundamentals of IT

**Class Test 2**

Time: 1 Hour

Max Marks: 20

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Note: All questions carry 1/2 mark.

Choose the correct answer:

1. The page table contains:
  - A. base address of each page in physical memory
  - B. page offset
  - C. page size
  - D. none of the mentioned
  
2. What is compaction?
  - A. a technique for overcoming internal fragmentation
  - B. a paging technique
  - C. a technique for overcoming external fragmentation
  - D. a technique for overcoming fatal error
  
3. Operating System maintains the page table for:
  - A. each process
  - B. each thread
  - C. each instruction
  - D. each address
  
4. In contiguous memory allocation :
  - A. each process is contained in a single contiguous section of memory
  - B. all processes are contained in a single contiguous section of memory
  - C. the memory space is contiguous
  - D. None of these
  
5. The relocation register helps in :
  - A. providing more address space to processes
  - B. a different address space to processes
  - C. to protect the address spaces of processes
  - D. None of these

6. When memory is divided into several fixed sized partitions, each partition may contain \_\_\_\_\_.
- A. exactly one process
  - B. atleast one process
  - C. multiple processes at once
  - D. None of these
7. In fixed sized partition, the degree of multiprogramming is bounded by \_\_\_\_\_.
- A. the number of partitions
  - B. the CPU utilization
  - C. the memory size
  - D. All of these
8. The first fit, best fit and worst fit are strategies to select a \_\_\_\_\_.
- A. process from a queue to put in memory
  - B. processor to run the next process
  - C. free hole from a set of available holes
  - D. All of these
9. A solution to the problem of external fragmentation is :
- A. compaction
  - B. larger memory space
  - C. smaller memory space
  - D. None of these
10. In internal fragmentation, memory is internal to a partition and :
- A. is being used
  - B. is not being used
  - C. is always used
  - D. None of these
11. External fragmentation exists when :
- A. enough total memory exists to satisfy a request but it is not contiguous
  - B. the total memory is insufficient to satisfy a request
  - C. a request cannot be satisfied even when the total memory is free
  - D. None of these
12. External fragmentation will not occur when :
- A. first fit is used
  - B. best fit is used
  - C. worst fit is used
  - D. no matter which algorithm is used, it will always occur
13. Sometimes the overhead of keeping track of a hole might be :
- A. larger than the memory
  - B. larger than the hole itself

- C. very small
  - D. All of these
14. When the memory allocated to a process is slightly larger than the process, then :
- A. internal fragmentation occurs
  - B. external fragmentation occurs
  - C. both a and b
  - D. neither a nor b
15. What is the ready state of a process?
- A. when process is scheduled to run after some execution
  - B. when process is unable to run until some task has been completed
  - C. when process is using the CPU
  - D. none of the mentioned
16. The address of the next instruction to be executed by the current process is provided by the:
- A. CPU registers
  - B. program counter
  - C. process stack
  - D. pipe
17. When a program tries to access a page that is mapped in address space but not loaded in physical memory, then?
- A. segmentation fault occurs
  - B. fatal error occurs
  - C. page fault occurs
  - D. no error occurs
18. Program always deals with:
- A. logical address
  - B. absolute address
  - C. physical address
  - D. relative address
19. In FIFO page replacement algorithm, when a page must be replaced:
- A. oldest page is chosen
  - B. newest page is chosen
  - C. random page is chosen
  - D. none of the mentioned
20. A thread is also called :
- A. Light Weight Process(LWP)
  - B. Heavy Weight Process(HWP)
  - C. process
  - D. None of these

21. What is operating system?
- A. collection of programs that manages hardware resources
  - B. system service provider to the application programs
  - C. link to interface the hardware and application programs
  - D. all of the mentioned
22. The main function of the command interpreter is:
- A. to get and execute the next user-specified command
  - B. to provide the interface between the API and application program
  - C. to handle the files in operating system
  - D. none of the mentioned
23. 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
24. 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
25. 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
26. 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
27. 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

28. Time quantum is defined in:
- A. shortest job scheduling algorithm
  - B. round robin scheduling algorithm
  - C. priority scheduling algorithm
  - D. multilevel queue scheduling algorithm
29. CPU scheduling is the basis of \_\_\_\_\_.
- A. multiprocessor systems
  - B. multiprogramming operating systems
  - C. larger memory sized systems
  - D. None of these
30. 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
31. 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
32. 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 these
33. Scheduling is done so as to :
- A. increase CPU utilization
  - B. decrease CPU utilization
  - C. keep the CPU more idle
  - D. None of these
34. 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 these
35. 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

36. CPU fetches the instruction from memory according to the value of:

- A. program counter
- B. status register
- C. instruction register
- D. program status word

37. Which one of the following is the address generated by CPU?

- A. physical address
- B. absolute address
- C. logical address
- D. none of the mentioned

38. Run time mapping from virtual to physical address is done by:

- A. memory management unit
- B. CPU
- C. PCI
- D. none of the mentioned

39. Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called:

- A. fragmentation
- B. paging
- C. mapping
- D. none of the mentioned

40. The address of a page table in memory is pointed by:

- A. stack pointer
- B. page table base register
- C. page register
- D. program counter