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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 mark.

Choose the correct answer.

1. To avoid race condition, number of processes that may be simultaneously inside their critical section is
  - A. 8
  - B. 1
  - C. 16
  - D. 0
  - E. None of the above
  
2. A system program that combines the separately compiled modules of a program into a form suitable for execution is
  - A. assembler
  - B. linking loader
  - C. cross compiler
  - D. load and go
  - E. None of the above
  
3. Process can be defined as
  - A. program in High level language kept on disk
  - B. contents of main memory
  - C. a program in execution
  - D. a job in secondary memory
  - E. None of the above
  
4. Addressing structure .....
  - A. defines the fundamental method of determining effective operand addresses
  - B. are variations in the use of fundamental addressing structures, or some associated actions which are related to addressing.
  - C. performs indicated operations on two fast registers of the machine and leave the result in one of the registers.
  - D. all of the above

- E. None of the above
5. The Memory Buffer Register (MBR) .....
- A. is a hardware memory device which denotes the location of the current instruction being executed.
  - B. is a group of electrical circuits (hardware), that performs the intent of instructions fetched from memory.
  - C. contains the address of the memory location that is to be read from or stored into.
  - D. contains a copy of the designated memory location specified by the MAR after a "read" or the new contents of the memory prior to a "write".
  - E. None of the above
6. The strategy of allowing processes that are logically runnable to be temporarily suspended is called
- A. preemptive scheduling
  - B. non preemptive scheduling
  - C. shortest job first
  - D. first come first served
  - E. None of the above
7. The LRU algorithm swaps out pages
- A. that have been used recently
  - B. that have not been used recently
  - C. that have been least used recently
  - D. the first page in a given area
  - E. None of the above
8. Forking means .....
- A. the dispatching of a task
  - B. the creation of a new job
  - C. the creation of a new process
  - D. increasing the priority of a task
  - E. None of the above
9. Which of the following statements is false?
- A. the technique of storage compaction involves moving all occupied areas of storage to one end or other of main storage
  - B. compaction does not involve relocation of programs
  - C. compaction is also known as garbage collection
  - D. the system must stop everything while it performs the compaction
  - E. None of the above
10. Interprocess communication is .....
- A. required for all processes

- B. usually done via disk drives
- C. never necessary,
- D. allows processes to synchronize activity

11. Memory can be defined as a .....

- A. device that performs a sequence of operations specified by instructions in memory.
- B. device where information is stored
- C. sequence of instructions
- D. instructions typically characterized by interactive processing and time-slicing of the CPU's time to allow quick response to each user.
- E. None of the above

12. What is the name given to the organized collection of software that controls the overall operation of a computer?

- A. Working system
- B. Peripheral system
- C. Operating system
- D. Controlling system
- E. None of the above

13. The principle of locality of reference justifies the use of

- A. registers
- B. non reusability
- C. virtual memory
- D. cache memory
- E. None of the above

14. The register or main memory location which contains the effective address of the operand is known as

- A. pointer
- B. indexed register
- C. special location
- D. scratch pad
- E. None of the above

15. The FIFO algorithm .....

- A. executes first the job that last entered the queue
- B. executes first the job that first entered the queue
- C. execute first the job that has been in the queue the longest
- D. executes first the job with the least processor needs
- E. None of the above

16. The Memory Address Register .....
- A. is a hardware memory device which denotes the location of the current instruction being executed.
  - B. is a group of electrical circuits (hardware), that performs the intent of instructions fetched from memory.
  - C. contains the address of the memory location that is to be read from or stored into.
  - D. contains a copy of the designated memory location specified by the MAR after a "read" or the new contents of the memory prior to a "write".
  - E. None of the above
17. Fragmentation of the file system
- A. occurs only if the file system is used improperly
  - B. can always be prevented
  - C. can be temporarily removed by compaction
  - D. is a characteristic of all file systems
  - E. None of the above
18. The memory allocation scheme subject to "external" fragmentation is
- A. segmentation
  - B. swapping
  - C. pure demand paging
  - D. multiple contiguous fixed partitions
  - E. None of the above
19. Memory management is .....
- A. not used in modern operating system
  - B. replaced with virtual memory on current systems
  - C. not used on multiprogramming systems
  - D. critical for even the simplest operating systems
  - E. None of the above
20. To access the services of operating system, the interface is provided by the:
- A. system calls
  - B. API
  - C. library
  - D. assembly instructions