

# **Operating System NCQs**

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## Solved MCQs on Operating System Principles

### Set-1

### 1. Which of the following is/ are the part of operating system?

- A) Kernel services
- B) Library services
- C) Application level services
- D) All of the above

2. The system of ...... generally ran one job at a time. These were called single stream batch processing.

- A) 40's
- B) 50's
- C) 60's
- D) 70's

3. In ..... generation of operating system, operating system designers develop the concept of multiprogramming in which several jobs are in main memory at once.

- A) First
- B) Second
- C) Third
- D) Fourth
- 4. State True or False.

i) In spooling high speed device like a disk is interposed between running program and low-speed device in Input/output.

ii) By using spooling for example instead of writing directly to a printer, outputs are written to the disk.

- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False
- 5. Which of the following is/are the functions of operating system?

i) Sharing hardware among users.

ii) Allowing users to share data among themselves.

iii) Recovering from errors.

iv) Preventing users from interfering with one another.

- v) Scheduling resources among users.
- A) i, ii, iii and iv only
- B) ii, iii, iv and v only
- C) i, iii, iv and v only
- D) All i, ii, iii, iv and v

6. ..... executes must frequently and makes the fine grained decision of which process to execute the next.

- A) Long-term scheduling
- B) Medium-term scheduling
- C) Short-term scheduling
- D) None of the above

7. With .....a page is brought into main memory only when the reference is made to a location on that page.

- A) demand paging
- B) main paging
- C) prepaging
- D) postpaging

8. ..... provides a larger sized of virtual memory but require virtual memory which provides multidimensional memory.

- A) Paging method
- B) Segmentation method
- C) Paging and segmentation method
- D) None of these

9. ..... is a large kernel containing virtually the complete operating system, including, scheduling, file system, device drivers and memory management.

- A) Multilithic kernel
- B) Monolithic kernel
- C) Micro kernel
- D) Macro kernel

10. ..... is a large operating system core provides a wide range of services.

- A) Multilithic kernel
- B) Monolithic kernel
- C) Micro kernel
- D) Macro kernel
- 11. Which of the following is not the function of Microkernel?
- A) File management
- B) Low-level memory management
- C) Inter-process communication
- D) I/O interrupts management

### 12. Match the following.

- i) Mutual exclusion
- ii) Hold and wait
- a) A process may hold allocated resources while waiting assignment.
- b) No resource can be forcibly removed from a process holding it.

c) Only one process may use a resource at a time.

- iii) No preemption
- A) i-a, ii-b, iii-c
- B) i-a, ii-c, iii-b
- C) i-b, ii-c, iii-a
- D) i-c, ii-a, iii-b

### 13. A direct method of deadlock prevention is to prevent the occurrences of .....

- A) Mutual exclusion
- B) Hold and wait
- C) Circular waits
- D) No preemption

# 14. The methods or algorithms which are used to increase the performance of disk storage sub-system is called .....

- A) Disk performing
- B) Disk scheduling
- C) Disk storing
- D) Disk extending

15. ..... is the time required to move the disk arm to the required track.

- A) Seek time
- B) Rotational delay
- C) Latency time
- D) Access time
- 16. The ..... policy restricts scanning to one direction only.
- A) SCAN
- B) C-SCAN
- C) N-Step SCAN
- D) Both A and B

17. ..... policy selects the disk I/O request that requires the least movement of the disk arm from its current position.

- A) FSCAN
- B) SSTF
- C) SCAN
- D) C-SCAN

18. ..... refers to the ability of an operating system to support multiple threads of execution with a single process.

- A) Multithreading
- B) Multiprocessing
- C) Multiexecuting
- D) Bi-threading
- 19. State whether the following statement is true.
- i) It takes less time to terminate a thread than a process.
- ii) Threads enhance efficiency in communication between different executing programs.
- A) i-True, ii-False
- B) i-True, ii-True
- C) i-False, ii-True
- D) i-False, ii-False

20. ..... is a special type of programming language used to provide instructions to the monitor simple batch processing schema.

- A) Job control language (JCL)
- B) Processing control language (PCL)
- C) Batch control language (BCL)
- D) Monitor control language (MCL)

### **Answers**:

- 1. D) All of the above
- 2. B) 50's
- 3. C) Third
- 4. B) i-True, ii-True
- 5. D) All i, ii, iii, iv and v
- 6. C) Short-term scheduling
- 7. A) demand paging
- 8. B) Segmentation method
- 9. B) Monolithic kernel
- 10. D) Macro kernel
- 11. A) File management
- 12. D) i-c, ii-a, iii-b
- 13. C) Circular waits
- 14. B) Disk scheduling
- 15. A) Seek time
- 16. A) SCAN
- 17. B) SSTF
- 18. A) Multithreading
- 19. B) i-True, ii-True
- 20. A) Job control language (JCL

### Set-2

**1**. The first batch operating system was developed in the..... by General Motors for use on an IBM 701.

- A) mid 1940's
- B) mid 1950's
- C) mid 1960's
- D) mid 1970's
- 2. Process is .....
- A) A program in execution
- B) An instance of a program running on a computer.
- C) The entity that can be assigned to and executed
- D) All of the above.

3. ..... is a facility that allows programmers to address memory from a logical point of view, without regard to the main memory, physically available.

- A) Visual memory
- B) Real memory
- C) Virtual memory
- D) Secondary memory

4. ..... is a large kernel, including scheduling file system, networking, device drivers, memory management and more.

- A) Monolithic kernel
- B) Micro kernel
- C) Macro kernel
- D) Mini kernel

5. A ...... architecture assigns only a few essential functions to the kernel, including address spaces, Inter process communication(IPC) and basic scheduling.

- A) Monolithic kernel
- B) Micro kernel
- C) Macro kernel

D) Mini kernel

### 6. State whether true or false.

i) Multithreading is useful for application that perform a number of essentially independent tasks that do not be serialized.

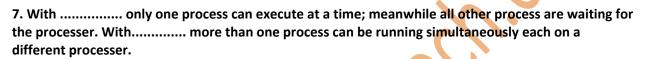
ii) An example of multithreading is a database server that listens for and process numerous client request.

A) i-True, ii-False

B) i-True, ii-True

C) i-False, ii-True

D) i-False, ii-False



- A) Multiprocessing, Multiprogramming
- B) Multiprogramming, Uniprocessing
- C) Multiprogramming, Multiprocessing
- D) Uniprogramming, Multiprocessing
- 8. The two central themes of modern operating system are.....
- A) Multiprogramming and Distributed processing
- B) Multiprogramming and Central Processing
- C) Single Programming and Distributed processing
- D) None of above

9. ..... refers to the ability of multiple process (or threads) to share code, resources or data in such a way that only one process has access to shared object at a time.

- A) Synchronization
- B) Mutual Exclusion
- C) Dead lock
- D) Starvation

10. ..... is the ability of multiple process to co-ordinate their activities by exchange of information

A) Synchronization

B) Mutual Exclusion

- C) Dead lock
- D) Starvation

11. ..... refers to a situation in which a process is ready to execute but is continuously denied access to a processor in deference to other processes.

- A) Synchronization
- **B)** Mutual Exclusion
- C) Dead lock
- D) Starvation
- 12. Which of the following is not the approach to dealing with deadlock?
- A) Prevention
- B) Avoidance
- C) Detection
- D) Deletion

### 13. Which of the following are the states of a five state process model?

i) Running	ii) Ready	iii) New	iv) Exit	v) Destroy
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- A) i, ii, iii and v only
- B) i, ii, iv and v only
- C) i, ii, iii, and iv only
- D) All i, ii, iii, iv and v

### 14. State which statement is true for Suspended process?

- i) The process is not immediately available for execution.
- ii) The process may be removed from suspended state automatically without removal order.
- A) i only 🧹
- B) ii only
- C) i and ii only
- D) None

### 15. Following is/are the reasons for process suspension.

- A) Swapping parent process
- B) Inter request
- C) Timing

D) All of the above

### 16. The different types of tables maintained by the operating system are .....

- A) memory, logical , I/O file
- B) memory, I/O, file, physical
- C) memory, I/O, file, process
- D) memory, logical, I/O, physical

### 17. Which of the following information not included in memory table?

- A) The allocation of main memory to process.
- B) The allocation of secondary memory to process
- C) Any information needed to manage virtual memory
- D) Any information about the existence of file
- 18. Process Management function of an operating system kernel includes.
- A) Process creation and termination.
- B) Process scheduling and dispatching
- C) Process switching
- D) All of the above
- 19. The typical elements of process image are .....
- i) User data ii) System Data
- iii) User program
- iv) System stack

- A) i, iii and iv only
- B) i, ii, and iv only
- C) ii, iii, and iv only
- D) All i, ii, iii, and iv

### 20. Match the following mechanisms for interrupting the execution of a process and their uses.

i) Interrupt	a) Call to an operating system function
ii) Trap	b) Reaction to an asynchronous external event
iii) Supervisor Call	c) Handling of a error or an exception condition
A) i-a, ii-b, iii-c	
B) i-c, ii-a, iii-b	
C) i-b, ii-c, iii-a	
D) i-a, ii-c, iii-b	

### Answers

- 1. B) mid 1950's
- 2. D) All of the above.
- 3. C) Virtual memory
- 4. A) Monolithic kernel
- 5. B) Micro kernel
- 6. B) i-True, ii-True
- 7. C) Multiprogramming, Multiprocessing
- 8. A) Multiprogramming .....processing
- 9. B) Mutual Exclusion
- 10. A) Synchronization
- 11. D) Starvation
- 12. D) Deletion
- 13. C) i, ii, iii, and iv only
- 14. A) i only
- 15. D) All of the above
- 16. C) memory, I/O, file, process
- 17. D) Any information..... of file
- 18. D) All of the above
- 19. A) i, iii and iv only
- 20. C) i-b, ii-c, iii-a

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- <u>Solved MCQ of Operating System Set-6</u>
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### Set-3

- 1. The unit of dispatching is usually referred to as a .....
- A) Thread
- B) Lightweight process
- C) Process
- D) Both A and B
- 2. ..... is a example of an operating system that support single user process and single thread.
- A) UNIX
- B) MS-DOS
- C) OS/2
- D) Windows 2000

### 3. State true or false.

- i) Unix, support multiple user process but only support one thread per process.
- ii) A java run time environment is an example of a system of one process with multiple threads.
- A) True, False
- B) True, True
- C) False, True
- D) False, False

4. ..... are very effective because a mode switch is not required to switch from one thread to another.

- A) Kernel-level threads
- B) User-level threads
- C) Alterable threads
- D) Application level threads

5. ..... is a condition in which there is a set of concurrent processes, only one of which is able to access a given resource or perform a given function at any time.

A) Mutual Exclusion

B) Busy Waiting

C) Deadlock

### D) Starvation

6. ..... Techniques can be used to resolve conflicts, such as competition for resources, and to synchronize processes so that they can cooperate.

- A) Mutual Exclusion
- B) Busy Waiting
- C) Deadlock
- D) Starvation

7. ..... Can be defined as the permanent blocking of a set of processed that either complete for system resources or communicate with each other.

- A) Deadlock
- B) Permanent lock
- C) Starvation
- D) Mutual exclusion
- 8. The following conditions of policy must be present for a deadlock to be possible.

ii) Hold and wait

iv) Circular wait

- i) Mutual exclusion
- iii) No preemption
- A) i, ii and iii only
- B) ii, iii and iv only
- C) i, iii and iv only
- D) All i, ii, iii and iv

9. A direct method of deadlock prevention is to prevent the occurrence of ......

- A) Mutual exclusion
- B) Hold and wait
- C) Circular waits
- D) No preemption
- 10. State true of false.
- i) With paging, each process is divided into relatively small, fixed-size pages.
- ii) Segmentation provides for the use of pieces of varying size.
- A) Partition management
- B) Memory management

- C) Disk management
- D) All of the above

### Answers

- 1. D) Both A and B
- 2. B) MS-DOS
- 3. B) True, True
- 4. B) User-level threads
- 5. A) Mutual Exclusion
- 6. A) Mutual Exclusion
- 7. A) Deadlock
- 8. D) All i, ii, iii and iv
- 9. C) Circular waits
- 10. B) Memory management

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### Set-4

1. ..... Involves treating main memory as a resource to be allocated to and shared among a number of active processes.

- A) Partition management
- B) Memory management
- C) Disk management
- D) All of the above

2. A process that execute only in main memory is referred to as ...... and that allocated in disk is referred to a .....

- A) Virtual memory, true memory
- B) Virtual memory, real memory
- C) Real memory, virtual memory
- D) Imaginary memory, real memory
- 3. In process scheduling, ...... determines when new processes are admitted to the system.
- A) long term scheduling
- B) medium term scheduling
- C) short term scheduling
- D) none of the above

### 

- A) long term scheduling
- B) medium term scheduling
- C) short term scheduling
- D) none of the above

### 5. The sum of the seek time, and the rotational delay is called the .....

- A) reached time
- B) access time
- C) arrived time
- D) common time

6. The ..... policy segments the disks request queue into sub queues of the length N.

- A) SCAN
- B) C-SCAN
- C) N-Step SCAN
- D) FSCAN

### 7. Which of the following are the functions of operating system?

- i) recovering from errors
- ii) facilitating input/outputiv) sharing hardware among users

iv) Mapping file in secondary storage.

- iii) facilitating parallel operation
- v) implementing user interface
- A) i, ii, ii, and v only
- B) i, ii, iii, and iv only
- C) ii, iii, iv and v only
- D) All i, ii, iii, iv and v

### 8. File management function of the operating system includes

- i) File creation and deletion ii) Disk scheduling
- iii) Directory creation
- A) i, ii and iii only
- B) i, iii and iv only
- C) ii, iii and iv only
- D) All i, ii, iii and iv
- 9. The ...... Determines when a page should be brought into main memory.
- A) Fetch policy
- B) Placement policy
- C) Replacement policy
- D) Resident set management

**10.** With ...... A page is written out to secondary memory only when it has been selected for replacement.

- A) pre-cleaning
- B) demand cleaning
- C) required cleaning

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D) fast cleaning

### Answers

- 1. B) Memory management
- 2. C) real .... virtual memory
- 3. A) long term scheduling
- 4. C) short term scheduling
- 5. B) access time
- 6. C) N-Step SCAN
- 7. D) All i, ii, iii, iv and v
- 8. B) i, iii and iv only
- 9. A) Fetch policy
- 10. B) demand cleaning

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### Set-5

- 1) The process is.....
- A. an instance of a program in execution
- B. a program only
- C. a processor state
- D. the kernel state
- 2) The mechanism that brings a page into memory only when it is needed is called...
- A. segmentation
- B. fragmentation
- C. demand paging
- D. page replacement
- 3) The two paradigms if IPC are ..... and...
- A. call, reply
- B. shared memory, message passing
- C. send, receive
- D. call by value, call by reference
- 4) A program is passive while a process is.....
- A. inactive
- B. spontaneous
- C. active
- D. impulse
- 5) FIFO scheduling is.....
- A. preemptive scheduling
- B. non preemptive scheduling

- C. deadline scheduling
- D. fair share scheduling

6) ..... ensures that once transaction completes successively, the results of the operations become permanent.

- A. serializability
- B. synchronizability
- C. atomicity
- D. durability
- 7) A process is created and is initially put in the......
- A. ready queue
- B. device queue
- C. i/o queue
- D. waiting queue
- 8) Which directory implementation is used in most of the Operating System?
- A. single level directory structure
- B. two level directory structure
- C. tree directory structure
- D. acyclic directory structure
- 9) Isolation property is also known as.....
- A. Performance
- B. Serializability
- C. Durability
- D. Atomicity
- 10) A thread is a.....

A. task

- B. process
- C. program
- D. light weight process
- 11) The interval from the fine submission of a process to the time of completion is the.....
- A. waiting time
- B. blocked time
- C. turnaround time
- D. response time
- 12) The term "Operating System" means......
- A. a set of programs which controls computer working
- B. the way a computer operator works
- C. conversion of high-level language in to machine level language
- D. the way a floppy disk drive operates
- 13) Generally we have user level threads and .....
- A. Programmer level thread
- B. kernel level thread
- C. program level thread
- D. process level thread

14) To ensure that the ...... condition never occurs in the system, we must guarantee that, whenever a process requests a resource, it does not have any other resource.

- A. mutual exclusion
- B. no-preemption
- C. circular waits
- D. hold and wait

- 15) Resource locking......
- A. allows multiple tasks to simultaneously use resource
- B. forces only on takes to use any resource at any time
- C. can easily cause a dead lock condition
- D. in not used for disk drives

16) A program responsible for assigning the CPU to the process that has been selected by the short term scheduler is known as......

- A. scheduler
- B. dispatcher
- C. debugger
- D. compiler

17) The ...... instruct Kernel to do various operations of the calling program and exchange data between the Kernel at the program.

- A. shell
- B. editors
- C. system calls
- D. commands

18) Which of the following buffering strategies are used in interprocess communication?

- A. null pointer
- B. single message buffer
- C. multiple message buffer
- D. all of the above

19) The process of splitting of data into equal size partitions over multiple disks is known as .....

- A. data stripping
- B. array of disks
- C. RAID
- D. SCAN

- 20) Pipes allow transfer of data between processor in a ...... manner.
- A. last in first out
- B. shortest job first
- C. multilevel queue
- D. first in first out

### **Answers:**

- 1) A. an instance of a program in execution
- 2) C. demand paging
- 3) B. shared memory, message passing
- 4) C. active
- 5) B. non preemptive scheduling
- 6) D. durability
- 7) A. ready queue
- 8) C. tree directory structure
- 9) B. Serializability
- 10) D. light weight process
- 11) C. turnaround time
- 12) A. a set of programs which controls computer working
- 13) B. kernel level thread
- 14) D. hold and wait
- 15) B. forces only on takes to use any resource at any time
- 16) B. dispatcher
- 17) C. system calls
- 18) D. all of the above
- 19) A. data stripping
- 20) D. first in first out

### Set-6

1) The process of storing extra or duplicate information used for rebuilding the lost information in event of disks failure is known as...

- A. stripping
- B. redundancy
- C. disk array
- D. RAID

2) A thread that is to be cancelled is often referred to as the....

- A. target thread
- B. thread cancellation
- C. asynchronous cancellation
- D. defined cancellation

3) ..... ensures the every message sent to a group of receivers will be delivered to either all of them or none of them.

- A. Ordered delivery
- B. Atomicity
- B. Survivability
- D. Reliability

4) An arrangement of record in a sequence in which they arrive is known as a .....

A. pile

- B. file
- C. disk
- D. directory
- 5) ..... also known as monitor mode.
- A. User mode

- B. System mode
- C. Unprivileged mode
- D. Process mode

6) The technique, for sharing the time of a computer among several jobs, which switches jobs so rapidly such that each job appears to have the computer to itself, is called......

- A. time sharing
- B. time out
- C. time domain
- D. multitasking
- 7) For batch and payroll applications which of the following file organization is better......
- A. random file
- B. sequential file
- C. indexed file
- D. hashed file

8) Name the scheduler that selects among the processes that are ready to execute and allocates the CPU to one of them.

- A. Long term scheduler
- B. Medium term scheduler
- C. Job scheduler
- D. Short term scheduler
- 9) Failure during inter-process communication may be due to.....
- A. loss of request transfer unit
- B. single datagram messages
- C. multidatagram messages
- D. message passing

- 10) The process of direct mapping by using some faster algorithms is called as.....
- A. hashing
- B. searching
- C. sorting
- D. indexing

11) Name the system in which the processors do not share memory and each processor that its own local memory.

- A. Tightly coupled system
- B. Parallel processing system
- C. Loosely coupled system
- D. Batch processing system

12) Which technique was introduced because a single job could not keep both the CPU and I/O devices busy?

- A. Time-sharing
- B. Spooling
- C. preemptive scheduling
- D. Multiprogramming

13) Those directories in which the root directory has all system file and no other sub-directory is known as ...

- A. flat directory
- B. single directory
- C. hierarchical directory
- D. indexed directory

14) Which is responsible for maintaining all the important abstractions of the operating system?

- A. Kernel
- **B.** System libraries
- C. System utilities

### D. Daemons

- 15) A four message reliable IPC protocol for client server communication works as......
- A. request, reply, acknowledgement
- B. reply, acknowledgement, request, acknowledgement
- C. request, acknowledgement, reply, acknowledgement
- D. request, request, reply, acknowledgement
- 16) A path name that starts at root directory is.....
- A. absolute
- B. relative
- C. hybrid
- D. hierarchical
- 17) Where does the problem of fragmentation occur?
- A. Static storage allocation
- B. Static allocation storage
- C. Stack allocation with dynamic binding
- D. Heap allocation
- 18) Idempotency basically means......
- A. reliability
- B. repeatability
- C. Survivability
- D. flexibility

19) All path names are specified relative to the working directory......

- A. absolute path name
- B. relative path name

### C. hybrid path name

D. hierarchical path name

20) The time taken by the disk arm to locate the specific address of a sector for getting information is called......

- A. rotational latency
- B. seek time
- C. search time
- D. response time

### **Answers:**

- 1) B. redundancy
- 2) A. target thread
- 3) B. Atomicity
- 4) A. pile
- 5) B. System mode
- 6) A. time sharing
- 7) B. sequential file
- 8) D. Short term scheduler
- 9) B. single datagram messages
- 10) A. hashing
- 11) C. Loosely coupled system
- 12) D. Multiprogramming
- 13) A. flat directory
- 14) A. Kernel
- 15) C. request, acknowledgement, reply, acknowledgement
- 16) A. absolute
- 17) D. Heap allocation
- 18) B. repeatability
- 19) B. relative path name
- 20) D. response time

### Set-7

- 1) Which of the following is crucial time while accessing data on the disk?
- A. Seek time
- B. Rotational time
- C. Transmission time
- D. Waiting time
- 2) What is the primary job of the operating system is a computer?
- A. Command resources
- B. Manage resources
- C. Provide utilities
- D. Be user friendly
- 3) The ...... is a user process that initiates a remote procedure call.
- A. client
- B. server
- C. network
- D. operating system
- 4) Which of the following memory allocation scheme suffers from external fragmentation?
- A. Segmentation
- B. Pure demand paging
- C. Swapping
- D. Paging

5) Which of the following is used to removal of process from active contention of CPU and reintroduce them into memory later?

- A. Interrupt
- B. Swapping

- C. Signal
- D. Thread
- 6) The operating system manages.....
- A. memory
- B. processor
- C. disk and I/O devices
- D. all of the above
- 7) Information about a process is maintained in a.....
- A. stack
- B. translation looks a side buffer
- C. process control block
- D. program control block
- 8) Paging.....
- A. solves the memory fragmentation problem
- B. allows modular programming
- C. allows structured programming
- D. avoids deadlock
- 9) Which is not the layer of the Operating system?
- A. Kernel
- B. Shell
- C. Application program
- **D.** Critical Section
- 10) Distributed OS works on the ..... principle.
- A. file foundation

B. single system image

- C. multi system image
- D. networking image

11) The collection of processes on the disk that is waiting to be brought into memory for execution forms the ......

- A. ready queue
- B. device queue
- C. input queue
- D. priority queue

12) In ...... condition, processes are allowed to request for new resources without releasing the resources that they are currently holding.

- A. Mutual exclusion
- B. Hold and wait
- C. No preemption
- D. Circular wait

13) The time taken by the disk arm to locate the specific address of a sector for getting information is called .....

- A. rotational delay
- B. seek time
- C. search time
- D. response time

14) The principle of locality of reference justifies the use of......

- A. virtual memory
- B. interrupts
- C. main memory
- D. cache memory

15) In ..... condition, a resource that has been allocated to a process becomes available for allocation to another process only after it has been voluntarily released by the process holding it.

- A. Mutual exclusion
- B. Hold and wait
- C. No preemption
- D. Circular wait
- 16) Identify the odd thing in the services of operating system...
- A. Accounting
- **B.** Protection
- C. Error detection and correction
- D. Dead lock handling
- 17) Multiprocessing.....
- A. makes the operating system simpler
- B. allows multiple processes to run simultaneously
- C. is completely understood by all major computer vendors
- D. allows the same computer to have the multiple processors

18) In ..... condition, two or more processes must form a circular chain in which each process is waiting for a resource that is held by the next member of the chain.

- A. Mutual exclusion
- B. Hold and wait
- C. No preemption
- D. Circular waits

19) Which of the following is not advantage of multiprogramming?

- A. Increased throughput
- B. Shorter response time
- C. Decreased operating system overhead

- D. Ability to assign priorities of jobs
- 20) Which is not a state of the process?
- A. Blocked
- B. Running
- C. Ready
- D. Privileged

### **Answers:**

- 1) A. Seek time
- 2) B. Manage resources
- 3) A. client
- 4) A. Segmentation
- 5) B. Swapping
- 6) D. all of the above
- 7) C. process control block
- 8) A. solves the memory fragmentation problem
- 9) D. Critical Section
- 10) B. single system image
- 11) C. input queue
- 12) B. Hold and wait
- 13) B. seek time
- 14) D. cache memory
- 15) C. No preemption
- 16) C. Error detection and correction
- 17) D. allows the same computer to have the multiple processors
- 18) D. Circular waits
- 19) C. Decreased operating system overhead
- 20) D. Privileged

# **Solved MCQ of Computer Security**

### Set -1

**1.** In computer security, ...... means that computer system assets can be modified only by authorized parities.

- A) Confidentiality
- B) Integrity
- C) Availability
- D) Authenticity

2. In computer security, ...... means that the information in a computer system only be accessible for reading by authorized parities.

- A) Confidentiality
- B) Integrity
- C) Availability
- D) Authenticity

3. The type of threats on the security of a computer system or network are .....

- i) Interruption ii) Interception iii) Modification
- iv) Creation v) Fabrication
- A) i, ii, iii and iv only
- B) ii, iii, iv and v only
- C) i, ii, iii and v only
- D) All i, ii, iii, iv and v

4. Which of the following is independent malicious program that need not any host program?

- A) Trap doors
- B) Trojan horse
- C) Virus
- D) Worm

5. The ...... is code that recognizes some special sequence of input or is triggered by being run from a certain user ID of by unlikely sequence of events.

- A) Trap doors
- B) Trojan horse
- C) Logic Bomb
- D) Virus

6. The ..... is code embedded in some legitimate program that is set to "explode" when certain conditions are met.

- A) Trap doors
- B) Trojan horse
- C) Logic Bomb
- D) Virus

7. Which of the following malicious program do not replicate automatically?

- A) Trojan Horse
- B) Virus
- C) Worm
- D) Zombie

8. ..... programs can be used to accomplish functions indirectly that an unauthorized user could not accomplish directly.

- A) Zombie
- B) Worm
- C) Trojan Horses
- D) Logic Bomb
- 9. State whether true of false.
- i) A worm mails a copy of itself to other systems.
- ii) A worm executes a copy of itself on another system.
- A) True, False
- B) False, True
- C) True, True
- D) False, False

10. A ..... is a program that can infect other programs by modifying them, the modification includes a copy of the virus program, which can go on to infect other programs.

A) Worm

B) Virus

C) Zombie

D) Trap doors

### Answers

- 1. B) Integrity
- 2. A) Confidentiality
- 3. C) i, ii, iii and v only
- 4. D) Worm
- 5. A) Trap doors
- 6. C) Logic Bomb
- 7. A) Trojan Horse
- 8. C) Trojan Horses
- 9. C) True, True
- 10. B) Virus

### **Related Posts:**

- <u>Solved MCQ of Operating System Principles set-1</u>
- Solved MCQ of Operating System Principles set-2
- <u>Solved MCQ of Operating System Theory set-3</u>
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- Solved MCQ of Operating System Set-5
- Solved MCO of Operating System Set-6
- Solved MCQ Questions on Operating System set-7

#### Set – 2

1. ..... are used in denial of service attacks, typically against targeted web sites.

- A) Worm
- B) Zombie
- C) Virus
- D) Trojan horse
- 2. Select the correct order for the different phases of virus execution.

ii) Dormant phase

iv) Triggering phase

- i) Propagation phase
- iii) Execution phase
- A) i, ii, iii, and iv
- B) i, iii, ii and iv
- C) ii, i, iv an iii
- D) ii, iii, iv and i

3. A ...... attaches itself to executable files and replicates, when the infected program is executed, by finding other executable files to infect.

- A) Stealth virus
- **B)** Polymorphic Virus
- C) Parasitic Virus
- D) Macro Virus

4. ..... is a form of virus explicitly designed to hide itself from detection by antivirus software.

- A) Stealth virus
- B) Polymorphic Virus
- C) Parasitic Virus
- D) Macro Virus

5. A ..... creates copies during replication that are functionally equivalent but have distinctly different bit patterns.

A) Boot Sector Virus

**B)** Polymorphic Virus

C) Parasitic Virus

#### D) Macro Virus

6. A portion of the Polymorphic virus, generally called a ....., , creates, a random encryption, key to encrypt the remainder of the virus.

- A) mutual engine
- B) mutation engine
- C) multiple engine
- D) polymorphic engine

#### 7. State whether the following statement is true.

- i) A macro virus is platform independent.
- ii) Macro viruses infect documents, not executable portions of code.
- A) i-only
- B) ii-only
- C) Both i and ii
- D) Non i and ii

#### 8. The type(s) of auto executing macros, in Microsoft word is/are

- A) Auto execute
- B) Auto macro
- C) Command macro
- D) All of the above

9. In ....., the virus places an identical copy of itself into other programs or into certain system areas on the disk.

- A) Dormant phase
- B) Propagation phase
- C) Triggering phase
- D) Execution phase

**10.** A ..... is a program that secretly takes over another Internet-attached computer and then uses that computer to launch attacks.

A) Worm

B) Zombie

C) Virus

D) Trap doors

 $\mathbf{N}$ 

#### Answers

- 1. B) Zombie
- 2. C) ii, i, iv an iii
- 3. C) Parasitic Virus
- 4. A) Stealth virus
- 5. B) Polymorphic Virus
- 6. B) mutation engine
- 7. C) Both i and ii
- 8. D) All of the above
- 9. B) Propagation phase
- 10. B) Zombie

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#### **Objective Questions on Core Operating System**

#### Set-1

1) An optimal scheduling algorithm in terms of minimizing the average waiting time of a given set of process is ...

- A. FCFS scheduling
- B. Round robin scheduling algorithm
- C. Shortest job first scheduling algorithm
- D. Priority scheduling algorithm
- 2) The hardware mechanism that enables a device to notify the CPU is called......
- A. polling
- B. interrupts
- C. system call
- D. none of the above
- 3) In the running state.....
- A. only the process which has control of the processor is found
- B. all the process waiting for I/O to be completed are found
- C. all the processes waiting for the processor are found
- D. none of the above

4) Which technique was introduced because a single job could keep both the CPU and the I/O devices busy?

- A. Time sharing
- B. Spooling
- C. Preemptive scheduling
- D. Multiprogramming

- 5) RMA works on static priorities while EDF algorithm works on......
- A. starvation
- B. dynamic priorities
- C. RR scheduling
- D. FIFO scheduling

6) In the..... method of data transfer, the participation of the processor is eliminated during data transfer.

- A. buffering
- B. caching
- C. direct memory access
- D. indirect memory access
- 7) Inter process communication can be done through.
- A. mails
- B. messages
- C. system calls
- D. traps
- 8) RR scheduling is most suitable for.....
- A. time shared OS
- B. distributed OS
- C. real time OS
- D. an Ordinary OS

9) The aim of ...... transparency is to ensure that the movement of the object is handled automatically by the system in a user transparent manner.

- A. location
- B. name
- B. migration

D. scaling

10) ..... is a memory management scheme that permits the physical address space of a process to be noncontiguous.

- A. Paging
- **B.** Segmentation
- C. Virtual memory
- D. main memory
- 11) Context switching is.....
- A. part of spooling
- B. part of polling
- C. part of interrupt handling
- D. part of paging

12) The normal functioning of an RPC may get disrupted due to.....

- A. call message gets lost
- B. response message gets lost
- C. called node and caller node crashes and is restarted
- D. All of the above
- 13) Mutual exclusion is referred as.....
- A. if one process is in a critical region others are excluded
- B. prevents deadlock
- C. requires semaphore to implement
- D. is found only in the Windows NT operating system

14) IFO scheduling is.....

A. preemptive

B. non-preemptive

- C. deadline scheduling
- D. RR scheduling
- 15) ..... deals with the process of deciding which process should be assigned to which processor.
- A. Process migration
- **B.** Processor allocation
- C. threads
- D. none of the above
- 16) Which scheduler controls the degree of multiprogramming?
- A. Short term scheduler
- B. Long term scheduler
- C. Middle term scheduler
- D. Pre term scheduler
- 17) Safe state is.....
- A. deadlock state
- B. non-deadlocked state
- C. polling state
- D. spooling state

18) ...... time is defined as the time period for which the execution of the process is stopped for transferring its information to the destination node.

A. turn around

- B. latency
- C. freezing
- D. execution
- 19) The principle of locality of reference justifies the use of
- A. virtual memory

- B. interrupts
- C. main memory
- D. cache memory
- 20) For a multiple instances of resource type which algorithm is used......
- A. divide and conquer algorithm
- B. banker's algorithm
- C. partition algorithm
- D. sorting algorithm

#### **Answers:**

- 1) C. Shortest job first scheduling algorithm
- 2) B. interrupts
- 3) A. only the process which has control of the processor is found
- 4) D. Multiprogramming
- 5) C. RR scheduling
- 6) C. direct memory access
- 7) B. messages
- 8) A. time shared OS
- 9) B. migration
- 10) A. Paging
- 11) C. part of interrupt handling
- 12) D. All of the above
- 13) A. if one process is in a critical region others are excluded
- 14) B. non-preemptive
- 15) B. Processor allocation
- 16) B. Long term scheduler
- 17) B. non-deadlocked state
- 18) C. freezing
- 19) D. cache memory
- 20) B. banker's algorithm

#### Set-2

1) In memory management, a technique called as paging, the physical memory is broken into fixed sized blocks called......

- A. pages
- B. frames
- C. blocks
- D. segments
- 2) Which method is used to recover from deadlock?
- A. Process termination
- B. Resource preemption
- C. Resource non-preemption
- D. Process termination and Resource preemption
- 3) Saving the state of the old process and loading the saved state of the new process is called....
- A. context switch
- B. static
- C. multi programming
- D. none of the above
- 4) The degree of Multiprogramming is controlled by.....
- A. CPU scheduler
- B. context switching
- C. long term scheduler
- D. medium term scheduler

5) Input transfers are done in advance and output transfers are done after sometimes in which of these technique?

A. Spooling

- **B.** Buffering
- C. Swapping
- D. Paging
- 6) A binary semaphore.....
- A. has the values one or zero
- B. is essential to binary computers
- C. is used only for synchronization
- D. is used only for mutual exclusion
- 7) A scheduling algorithm is fair.....
- A. if no process faces starvation.
- B. if a process is starved, detect it and run it with high priority
- C. if it uses semaphores
- D. only if a queue is used for scheduling
- 8) Which of the following is also known as double buffering?
- A. anticipated buffering
- B. buffer swapping
- C. circular buffering
- D. swapping buffering
- 9) ...... is the ability of a system to continue functioning in the event of partial system failure.
- A. fault avoidance
- B. fault tolerance
- C. fault detection
- D. fault recovery

10) Virtual memory is.....

A. an extremely large main memory

- B. an extremely large secondary memory
- C. an illusion of extremely large main memory
- D. a type of memory used in super computers

11) Error handling and I/O interrupt handling are the functions of.....

- A. I/O device Handler
- B. I/O traffic controller
- C. I/O scheduler
- D. I/O buffer
- 12) In a multithreaded environment.....
- A. each thread is allocated with new memory from main memory
- B. main thread terminates after the termination of child threads
- C. every process can have only one thread
- D. none of the above
- 13) The kernel keeps track of the state of each task by using a data structure called.....
- A. process control block
- B. user control block
- C. memory control block
- D. hardware control block
- 14) A virtual device is a.....
- A. dedicated for none purpose
- B. shared device converted to a dedicated device
- C. dedicated device converted to a shared device
- D. shared device

15) CPU scheduling is the basis of .....operating system.

A. batch

- B. real time
- C. multiprogramming
- D. monoprogramming

16) ..... is a high speed cache used to hold recently referenced page table entries a part of paged virtual memory?

- A. Translation looks a side buffer
- B. Inverse page table
- C. Segmented page table
- D. Indexed page table
- 17) A technique that smoothes out peaks in I/O demand is......
- A. spooling
- B. buffering
- C. swapping
- D. paging

18) In kernel model, the operating system services such as process management, memory management are provided by the kernel.

- A. monolithic
- B. micro
- C. macro
- **D.** Complex

19) A process is said to be in..... state if it was waiting for an event that will never occur.

- A. safe
- B. unsafe
- C. starvation
- D. dead lock

- 20) Which of the following is an example of spooled device?
- A. The terminal used to enter the input data for a program being executed
- B. The secondary memory device in a virtual memory system
- C. A line printer used to print the output of a number of jobs
- D. None of the above

#### **Answers:**

- 1) B. frames
- 2) D. Process termination and Resource preemption
- 3) A. context switch
- 4) C. long term scheduler
- 5) B. Buffering
- 6) A. has the values one or zero
- 7) A. if no process faces starvation
- 8) B. buffer swapping
- 9) B. fault tolerance
- 10) C. an illusion of extremely large main memory
- 11) A. I/O device Handler
- 12) B. main thread terminates after the termination of child threads
- 13) A. process control block
- 14) B. shared device converted to a dedicated device
- 15) C. multiprogramming
- 16) A. Translation looks a side buffer
- 17) B. buffering
- 18) A. monolithic
- 19) D. dead lock
- 20) C. A line printer used to print the output of a number of jobs