

Question No: 1 (Marks: 1) - Please choose one

A _____ (or an *exception*) is a software-generated interrupt caused either by an error (division by zero or invalid memory access) or by a user request for an operating system service.

- ▶ Interrupt
- ▶ **Trap (Page 7)**
- ▶ Signal
- ▶ Process

Question No: 2 (Marks: 1) - Please choose one

Which register holds the smallest legal physical memory address for a process?

- ▶ **Base register (Page 13)**
- ▶ Limit register
- ▶ Status register
- ▶ None of the given options

Question No: 3 (Marks: 1) - Please choose one

The process of switching from one process to another is called -----

- ▶ **context switching (Page 34)**
- ▶ scheduling
- ▶ quantum period
- ▶ latency

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Question No: 4 (Marks: 1) - Please choose one

The -----semaphore provides mutual exclusion for accesses to the buffer pool and is initialized to the value 1.

- ▶ **mutex (Page 118)**
- ▶ binary
- ▶ counting
- ▶ none of the given options

Question No: 5 (Marks: 1) - Please choose one

Binary semaphores are those that have only two values-----

- ▶ 0 and n
- ▶ 0 and 0
- ▶ **0 and 1 (Page 117)**
- ▶ None of the given options

Question No: 6 (Marks: 1) - Please choose one

Addresses generated *relative* to part of program, not to start of physical memory are

- ▶ Virtual
- ▶ Physical
- ▶ **Relocatable** [Click here for detail](#)
- ▶ Symbolic

Question No: 7 (Marks: 1) - Please choose one

Object files and libraries are combined by a ----- program to produce the executable binary

- ▶ Compiler
- ▶ Linker
- ▶ Text editor
- ▶ **Loader** [Click here for detail](#)

Question No: 8 (Marks: 1) - Please choose one

Physical memory is broken down into fixed-sized blocks, called----- and Logical memory is divided into blocks of the same size, called -----

- ▶ **Frames, pages (Page 165)**
- ▶ Pages, Frames
- ▶ Frames, holes
- ▶ Holes, segments

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Question No: 9 (Marks: 1) - Please choose one

A page table needed for keeping track of pages of the page table is called -----

- ▶ 2-level paging
- ▶ **Page directory (Page 173)**
- ▶ Page size
- ▶ Page table size

Question No: 10 (Marks: 1) - Please choose one

The address generated by the CPU, after any indexing or other addressing-mode arithmetic, is called a ----- address, and the address it gets translated to by the MMU is called a ----- address.

- ▶ **Virtual, physical [click here for detail](#)**
- ▶ Hexadecimal, Binary,
- ▶ Valid, invalid
- ▶ Physical, Virtual

Question No: 11 (Marks: 1) - Please choose one

Each page is a power of ----- bytes long in paging scheme.

- ▶ 2
- ▶ 3
- ▶ **4 (Page 167)**
- ▶ 5

Question No: 12 (Marks: 1) - Please choose one

_____ is a way to establish a connection between the file to be shared and the directory entries of the users who want to have access to this file.

- ▶ **Link (Page 231)**
- ▶ Directory
- ▶ Common Group
- ▶ Access Permission

Question No: 13 (Marks: 1) - Please choose one

When a _____ link is created, a directory entry for the existing file is created

- ▶ Soft
- ▶ **Hard (Page 227)**
- ▶ Soft or Hard
- ▶ None of the given options

Question No: 14 (Marks: 1) - Please choose one

The _____ method requires each file to occupy a set of contiguous blocks on the disk.

► **Contiguous Allocation (Page 236)**

- Linked Allocation
- Indexed Allocation
- None of the given options

Question No: 15 (Marks: 1) - Please choose one

Which part of the computer system helps in managing the file and memory management system?

► **Operating System (Page 5)**

- Device Drivers
- Application Software
- Hardware

Question No: 16 (Marks: 1) . - Please choose one

Which of the following is correct definition for wait operation?

► **wait(S) { (Page 111)**

while(S<=0)
;// no op
S--;
}

► **wait(S) {**
S++;
}

► **wait(S) {**
while(S>=0)
;// no op
S--;
}

► **wait(S) {**
S--;
}

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Question No: 17 (Marks: 1) - Please choose one

Wrong use of wait and signal operations (in context with semaphores) can cause _____ problem(s).

- ▶ Mutual Exclusion
- ▶ Deadlock
- ▶ Bounded Waiting
- ▶ **All of the given options are correct**

Question No: 18 (Marks: 1) - Please choose one

If a system is not in a safe state, there can be no deadlocks.

- ▶ True
- ▶ **False (Page 137)**

Question No: 19 (Marks: 1) - Please choose one

If a process continues to fault, replacing pages, for which it then faults and brings back in right away. This high paging activity is called _____.

- ▶ paging
- ▶ **thrashing (Page 210)**
- ▶ page fault
- ▶ CPU utilization

Question No: 20 (Marks: 1) - Please choose one

In _____ page replace algorithm we will replace the page that has not been used for the longest period of time.

- ▶ counter based
- ▶ Least Frequently Used
- ▶ FIFO
- ▶ **LRU (Page 202)**

Question No: 21 (Marks: 1) . - Please choose one

Overlays are implemented by the _____

- ▶ Operating system
- ▶ **Programmer (Page 159)**
- ▶ Kernel
- ▶ Shell

Question No: 22 (Marks: 1) - Please choose one

An acyclic graph does not allow directories to have shared subdirectories and files.

- ▶ True
- ▶ **False (Page 225)**

Question No: 23 (Marks: 1) - Please choose one

The size of pages and frames are same in logical memory and physical memory respectively.

- ▶ **True (Page 165)**
- ▶ False

Question No: 24 (Marks: 1) - Please choose one

A modification of free-list approach in free space management is to store the addresses of n free blocks in the first free block. Known as _____.

- ▶ counting
- ▶ linked list
- ▶ bit vector
- ▶ **grouping (Page 243)**

Question No: 25 (Marks: 1) - Please choose one

In deadlock detection and recovery algorithm, a deadlock exists in the system if and only if the wait for graph contains a _____.

- ▶ **Cycle (Page 147)**
- ▶ Graph
- ▶ Edge
- ▶ Node

Question No: 26 (Marks: 1) - Please choose one

Intel is basically designed for following Operating Systems except _____.

- ▶ **MULTICS (Page 182)**
- ▶ OS/2
- ▶ Windows
- ▶ Linux

Question No: 27 (Marks: 1) - Please choose one

Following is NOT true about Virtual memory.

- ▶ **Virtual memory help in executing bigger programs even greater in size that of main memory.**
- ▶ Virtual memory makes the processes to stuck when the collective size of all the processes becomes greater than the size of main memory.
- ▶ Virtual memory also allows files and memory to be shared by several different processes through page sharing.
- ▶ Virtual memory makes the task of programming easier because the programmer need not worry about the amount of physical memory,

Question No: 28 (Marks: 1) - Please choose one

The execution of critical sections must NOT be mutually exclusive

- ▶ True
- ▶ **False (Page 100)**

Question No: 29 (Marks: 1) - Please choose one

The critical section problem can be solved by the following except

- ▶ Software based solution
- ▶ **Firmware based solution (Page 101)**
- ▶ Operating system based solution
- ▶ Hardware based solution

Question No: 30 (Marks: 1) - Please choose one

The bottom layer in the layered approach of Operating System is-----

- ▶ User interface
- ▶ **Hardware (Page 21)**
- ▶ Kernel
- ▶ None of the given options



Question No: 1 (Marks: 1) - Please choose one

You can display the contents (names of files and directories) of a directory in UNIX/Linux directory structure with the ----- command.

- ▶ l
- ▶ s
- ▶ **ls (Page 28)**
- ▶ none of the given options

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Question No: 2 (Marks: 1) - Please choose one

----- spend more time doing IO than computations

- ▶ short CPU bursts
- ▶ CPU bound processes
- ▶ **IO bound processes (Page 32)**
- ▶ None of the given options

Question No: 3 (Marks: 1) - Please choose one

-----*buffer* places no practical limit on the size of the buffer

- ▶ Bounded
- ▶ **Unbounded (Page 44)**
- ▶ Both Unbounded & bounded
- ▶ None of the given options

Question No: 4 (Marks: 1) - Please choose one

With -----you use condition variables.

- ▶ Semaphores
- ▶ Read/Write Locks
- ▶ Swaps
- ▶ **Monitor (Page 126)**

Question No: 5 (Marks: 1) - Please choose one

Deadlocks can be described more precisely in terms of a directed graph called a system -----

- ▶ Directed graph
- ▶ Critical path
- ▶ **Resource allocation graph [Click here for detail](#)**
- ▶ Mixed graph

Question No: 6 (Marks: 1) - Please choose one

The integer value of _____ semaphores can not be greater than 1.

- ▶ Counting
- ▶ **Binary (Page 117)**
- ▶ Mutex
- ▶ Bounded buffer

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Question No: 7 (Marks: 1) - Please choose one

Starvation is infinite blocking caused due to unavailability of resources.

- ▶ **True (Page 115)**
- ▶ False

Question No: 8 (Marks: 1) - Please choose one

The set of all physical addresses corresponding to the logical addresses is a ----- of the process

- ▶ **Physical address space (Page 155)**
- ▶ Process address space
- ▶ None of the given options
- ▶ Logical address space

Question No: 9 (Marks: 1) - Please choose one

----- indicates size of the page table

- ▶ translation look-aside buffers
- ▶ **Page-table length register (PTLR) (Page 169)**
- ▶ Page-table base register (PTBR)
- ▶ Page offset

Question No: 10 (Marks: 1) - Please choose one

If validation bit is 0, it indicates a/an ----- state of segment.

- ▶ protected
- ▶ shared
- ▶ legal
- ▶ **illegal (Page 180)**

Question No: 11 (Marks: 1) - Please choose one

In ----- allocation scheme free frames are equally divided among processes

- ▶ **Fixed Allocation (Page 207)**
- ▶ Proportional Allocation
- ▶ Priority Allocation
- ▶ None of the given options

Question No: 12 (Marks: 1) - Please choose one

Progress and Bounded Waiting are some of the characteristics to solve the critical section problems.

- ▶ **True (Page 101)**
- ▶ False

Question No: 13 (Marks: 1) - Please choose one

_____ is used to store data on secondary storage device, e.g., a source program(in C), an executable program.

- ▶ Block Special File
- ▶ Link File
- ▶ **Ordinary File (Page 220)**
- ▶ Directory

Question No: 14 (Marks: 1) - Please choose one

The basic purpose of _____ is to help the users to utilize the hardware resources for completing different tasks in a simplified manner

- ▶ **Operating system (Page 6)**
- ▶ Application software
- ▶ All Software
- ▶ All of the given

Question No: 15 (Marks: 1) - Please choose one

User mode can run the Privileged instructions

- ▶ **True (Page 11)**
- ▶ False

Question No: 16 (Marks: 1) - Please choose one

_____ wastes CPU cycles and hence is a problem in real multiprogramming system.

- ▶ **Busy waiting (Page 13)**
- ▶ Spinlock
- ▶ Critical section
- ▶ Mutex

Question No: 17 (Marks: 1) - Please choose one

The _____ requires that no reader will be kept waiting unless a writer has already obtained permission to use the shared object.

- ▶ **first readers-writers problem (Page 119)**
- ▶ second readers-writers problem
- ▶ third readers-writers problem
- ▶ fourth readers-writers problem

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Question No: 18 (Marks: 1) - Please choose one

The process of holding at least one resource and waiting to acquire additional resources that are currently being held by other processes is known as_____.

- ▶ Mutual exclusion
- ▶ **Hold and wait (Page 131)**
- ▶ No preemption
- ▶ Circular wait

Question No: 19 (Marks: 1) - Please choose one

The condition where a set of blocked processes each holding a resource and waiting to acquire a resource held by another process in the set, is termed as _____.

- ▶ **Deadlock (Page 130)**
- ▶ Starvation

Question No: 20 (Marks: 1) - Please choose one

Banker's algorithm is used for _____

- ▶ **Deadlock avoidance (Page 140)**
- ▶ Deadlock detection
- ▶ Deadlock prevention
- ▶ Deadlock removal

Question No: 21 (Marks: 1) - Please choose one

A program can not execute unless whole or necessary part of it resides in the main memory.

- ▶ **True**
- ▶ False

Question No: 22 (Marks: 1) - Please choose one

The _____ requires that once a writer is ready, that writer performs its write as soon as possible, if a writer waiting to access the object, no new readers may start reading.

- ▶ first readers-writers problem
- ▶ **second readers-writers problem (Page 119)**
- ▶ third readers-writers problem
- ▶ fourth readers-writers problem

Question No: 23 (Marks: 1) - Please choose one

Which command, Display permissions and some other attributes for prog1.c in your current directory?

- ▶ **ls -l prog1.c (Page 234)**
- ▶ ls -d prog1.c
- ▶ ls file prog1.c
- ▶ ls -l prog1.c /Directory

Question No: 24 (Marks: 1) - Please choose one

In the C-Scan and C-Look algorithms, when the disk head reverses its direction, it moves all the way to the other end, without serving any requests, and then reverses again and starts serving requests.

- ▶ **True (Page 249)**
- ▶ False

Question No: 25 (Marks: 1) - Please choose one

In paged segmentation, we divide every segment in a process into _____ pages.

- ▶ **Fixed size (Page 182)**
- ▶ Variable size

Question No: 26 (Marks: 1) - Please choose one

Intel 80386 used paged segmentation with _____ level paging.

- ▶ One
- ▶ **Two (Page 185)**
- ▶ Three
- ▶ Four

Question No: 27 (Marks: 1) - Please choose one

The logical address of Intel 80386 is _____

- ▶ 36 bits
- ▶ **48 bits (Page 185)**
- ▶ 64 bits
- ▶ 128 bits

Question No: 28 (Marks: 1) - Please choose one

The Swap instruction which is the hardware solution to synchronization problem does not satisfy the _____ condition, hence not considered to be a good solution.

- ▶ Progress
- ▶ **Bounded waiting (Page 109)**
- ▶ Mutual exclusion
- ▶ None of the given

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Question No: 29 (Marks: 1) - Please choose one

The -----scheme is not applicable to a resource allocation system with multiple instances of each resource type.

- ▶ **Wait for graph (Page 148)**
- ▶ Resource allocation graph
- ▶ Both Resource-allocation and wait-for graph
- ▶ None of the given options

Question No: 30 (Marks: 1) - Please choose one

The following requirement for solving critical section problem is known as_____.

“There exists a bound on the number of times that other processes are allowed to enter their critical sections after a process has made a request to enter its critical section and before that request is granted.”

- ▶ Progress
- ▶ **Bounded Waiting (Page 101)**
- ▶ Mutual Exclusion
- ▶ Critical Region