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3	Tour and Travel management System	React+Springboot+MySql	
4	Election commition of India (online Voting System)	React+Springboot+MySql	
5	HomeRental Booking System	React+Springboot+MySql	
6	Event Management System	React+Springboot+MySql	
7	Hotel Management System	React+Springboot+MySql	
8	Agriculture web Project	React+Springboot+MySql	
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12	E-RTO Driving licence portal	React+Springboot+MySql	
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15	Online Food Delivery Portal	React+Springboot+MySql	
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25	RealEstate Property Project	React+Springboot+MySql
26	Marriage Hall Booking Project	React+Springboot+MySql
27	Online Student Management portal	React+Springboot+MySql
28	Resturant management System	React+Springboot+MySql
29	Solar Management Project	React+Springboot+MySql
30	OneStepService LinkLabourContractor	React+Springboot+MySql
31	Vehical Service Center Portal	React+Springboot+MySql
32	E-wallet Banking Project	React+Springboot+MySql
33	Blogg Application Project	React+Springboot+MySql
34	Car Parking booking Project	React+Springboot+MySql
35	OLA Cab Booking Portal	React+NextJs+Springboot+MySql
36	Society management Portal	React+Springboot+MySql
37	E-College Portal	React+Springboot+MySql
38	FoodWaste Management Donate System	React+Springboot+MySql
39	Sports Ground Booking	React+Springboot+MySql
40	BloodBank mangement System	React+Springboot+MySql

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42	Fruite Delivery Project	React+Springboot+MySql
43	Woodworks Bed Shop	React+Springboot+MySql
44	Online Dairy Product sell Project	React+Springboot+MySql
45	Online E-Pharma medicine sell Project	React+Springboot+MySql
46	FarmerMarketplace Web Project	React+Springboot+MySql
47	Online Cloth Store Project	React+Springboot+MySql
48	Train Ticket Booking Project	React+Springboot+MySql
49	Quizz Application Project	JSP+Springboot+MySql
50	Hotel Room Booking Project	React+Springboot+MySql
51	Online Crime Reporting Portal Project	React+Springboot+MySql
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### **Spring Boot + React JS + MySQL Project List**

Sr.No	Project Name	YouTube Link
1	Online E-Learning Hub Platform Project	https://youtu.be/KMjyBaWmgzg?si=YckHuNzs7eC84-IW
2	PG Mate / Room sharing/Flat sharing	https://youtu.be/4P9cIHg3wvk?si=4uEsi0962CG6Xodp
3	Tour and Travel System Project Version 1.0	https://youtu.be/-UHOBywHaP8?si=KHHfE_A0uv725f12
4	Marriage Hall Booking	https://youtu.be/VXz0kZQi5to?si=IIOS-QG3TpAFP5k7
5	<b>Ecommerce Shopping project</b>	https://youtu.be/vJ_C6LkhrZ0?si=YhcBylSErvdn7paq
6	Bike Rental System Project	https://youtu.be/FlzsAmIBCbk?si=7ujQTJqEgkQ8ju2H
7	Multi-Restaurant management system	https://youtu.be/pvV-pM2Jf3s?si=PgvnT-yFc8ktrDxB
8	Hospital management system Project	https://youtu.be/lynlouBZvY4?si=CXzQs3BsRkjKhZCw
9	Municipal Corporation system Project	https://youtu.be/cVMx9NVyI4I?si=qX0oQt-GT-LR_5jF
10	Tour and Travel System Project version 2.0	https://youtu.be/ 4u0mB9mHXE?si=gDiAhKBowi2gNUKZ

Sr.No	Project Name	YouTube Link
11	Tour and Travel System Project version 3.0	https://youtu.be/Dm7nOdpasWg?si=P_Lh2gcOFhlyudug
12	Gym Management system Project	https://youtu.be/J8_7Zrkg7ag?si=LcxV51ynfUB7OptX
13	Online Driving License system Project	https://youtu.be/3yRzsMs8TLE?si=JRI_z4FDx4Gmt7fn
14	Online Flight Booking system Project	https://youtu.be/m755rOwdk8U?si=HURvAY2VnizlyJlh
15	Employee management system project	https://youtu.be/ID1iE3W GRw?si=Y jv1xV BljhrD0H
16	Online student school or college portal	https://youtu.be/4A25aEKfei0?si=RoVgZtxMk9TPdQvD
17	Online movie booking system project	https://youtu.be/Lfjv_U74SC4?si=fiDvrhhrjb4KSlSm
18	Online Pizza Delivery system project	https://youtu.be/Tp3izreZ458?si=8eWAOzA8SVdNwlyM
19	Online Crime Reporting system Project	https://youtu.be/0UlzReSk9tQ?si=6vN0e70TVY1GOwPO
20	Online Children Adoption Project	https://youtu.be/3T5HC2HKyT4?si=bntP78niYH802I7N

# **Operating System MCQs List of Operating System MCQs**

1. An operating system is	which performs the entire basic task like file
management, process manag	ement, etc.

- A. Software
- B. Program
- C. Process
- D. Thread

**Answer:** A) Software

#### **Explanation:**

An operating system is a software that performs all the basic tasks like file management, process management, etc.

Discuss this Question

2. How many types of the operating system are there?

- A. 3
- B. 8
- C. 7

D. 6

Answer: C) 7

#### **Explanation:**

Mainly there are 7 types of operating systems: Batch OS, Multitasking OS, Multiprocessing OS, Real-time OS, Distributed OS, Network OS, and mobile OS.

Discuss this Question

- 3. Which of the following is the feature of the operating system?
  - A. Error detection aids
  - B. Control over system performance

- C. Job Accounting
- D. Coordination between other software and users
- E. All of the above

**Answer:** E) All of the above

#### **Explanation:**

Error detection aids, Control over system performance, Job accounting, Coordination between other software and users, Process management, Memory management, etc are some of the common features of the operating system.

Discuss this Question

- 4. Which of the following operating system does not interact with the computer directly, in fact in this operating system each user prepares his job in an offline device and submits it to the computer?
  - A. Batch Operating system
  - B. Multitasking Operating System
  - C. Time-sharing Operating System
  - D. Distributed Operating System

Answer: A) Batch Operating system

#### **Explanation:**

Batch Operating system does not interact with the computer directly, in fact in this operating system each user prepares his job in an offline device like a punch card and submits it to the computer.

Discuss this Question

- 5. \_\_\_ Operating system is a technique that enables many people, located at various terminals, to use a particular computer system at the same time?
  - A. Batch Operating system
  - B. Multitasking Operating System
  - C. Time-sharing Operating System
  - D. Distributed Operating System

**Answer:** C) Time-sharing Operating System

#### **Explanation:**

Time-sharing Operating System is a technique that enables many people, located at various terminals, to use a particular computer system at the same time; it is shared among different users.

Discuss this Question

#### 6. Which of the following is not a feature of the batch Operating system?

- A. Large turnaround time
- B. It is very easy to debug the program in this operating system
- C. Other pending jobs are affected due to a lack of protection schemes

**Answer:** B) It is very easy to debug the program in this operating system

#### **Explanation:**

No, in the batch OS it is very difficult to debug the program.

Discuss this Question

# 7. What is the main difference between batch Operating systems and time-sharing Operating systems?

- A. In a multi-programmed batch system, the objective is to minimize processor use, whereas, in time-sharing systems, the objective is to maximize response time
- B. In a multi-programmed batch system, the objective is to maximize processor use, whereas, in time-sharing systems, the objective is to minimize response time

**Answer:** B) In a multi-programmed batch system, the objective is to maximize processor use, whereas, in time-sharing systems, the objective is to minimize response time

#### **Explanation:**

In a multi-programmed batch system, the objective is to maximize processor use, whereas, in time-sharing systems, the objective is to minimize response time.

Discuss this Question

### 8. Among the Batch operating system and time-sharing operating system, which operating system reduces the CPU idle time?

- A. Batch Operating System
- B. Time-sharing Operating Systems

**Answer:** B) Time-sharing Operating Systems

#### **Explanation:**

In Timesharing Operating Systems, CPU idle time is reduced as it provides a quick response, whereas in batch OS CPU is often idle.

Discuss this Question

## 9. Which of the following Operating systems use multiple central processors to serve multiple real-time applications and multiple users?

- A. Batch Operating system
- B. Multitasking Operating System
- C. Time-sharing Operating System
- D. Distributed Operating System

**Answer:** D) Distributed Operating System

#### **Explanation:**

Distributed Operating systems use multiple central processors to serve multiple realtime applications and multiple users.

Discuss this Question

10. Which of the following Operating systems runs on a server and provides the server the capability to manage data, users, groups, etc?

- A. Batch Operating system
- B. Network operating system
- C. Mobile Operating system
- D. Real-time Operating system

**Answer:** B) Network operating system

#### **Explanation:**

Network Operating System runs on a server and provides the server the capability to manage data, users, groups, security, applications, and other networking functions.

Discuss this Question

#### 11. Which of the following is not a network operating system?

- A. Mac OS X
- B. Novell Netware
- C. BSD
- D. Oracle

Answer: D) Oracle

#### **Explanation:**

Oracle is not a network operating system.

Discuss this Question

### 12. In which of the following Operating systems the response time is very less as compared to online processing?

- A. Batch Operating system
- B. Network operating system
- C. Mobile Operating system
- D. Real-time Operating system

**Answer:** D) Real-time Operating system

**Explanation:** 

In a real-time Operating system the response time is very less as compared to online processing.

Discuss this Question

#### 13. How many types of real-time Operating systems are there?

- A. 3
- B. 2
- C. 5
- D. 6

Answer: B) 2

#### **Explanation:**

There are two types of real-time Operating Systems: Hard real-time systems, and soft real-time systems.

Discuss this Question

### 14. In which real-time Operating system, secondary storage is limited or missing and the data is stored in ROM?

- A. Hard real-time systems
  - B. The soft real-time system

**Answer:** A) Hard real-time systems

#### **Explanation:**

In a hard real-time system, secondary storage is limited or missing and the data is stored in ROM, moreover in these systems virtual memory is never found.

Discuss this Question

#### 15. What is a bootstrap program?

- A. It is the first code that is executed when the computer system is started
- B. It is the program that helps in restarting the system

C. It is just a simple program like we have other programs in a system

Answer: A) It is the first code that is executed when the computer system is started

#### **Explanation:**

It is the first code that is executed when the computer system is started; it is stored in computer hardware.

Discuss this Question

#### 16. \_\_\_ is the heart of an operating system?

- A. Software
- B. Programs
- C. CPU
- D. Kernel

Answer: D) Kernel

#### **Explanation:**

The kernel is the heart of an operating system; it is the kernel of an OS through which the OS controls the computer system.

Discuss this Question

#### 17. How many types of kernels are there?

- A. 6
- B. 7
- C. 9
- D. 5

Answer: D) 5

#### **Explanation:**

In total there are 5 types of kernels: Monolithic kernels, Microkernel kernels, Hybrid Kernels, Nano Kernels, and Exo kernels.

### 18. In which type of kernel does the entire operating system run as a single program?

- A. Monolithic kernel
  - B. Microkernel kernels
  - C. Hybrid Kernels
  - D. Nano Kernels
  - E. Exo kernels

**Answer:** A) Monolithic kernel

#### **Explanation:**

In a Monolithic kernel, the entire operating system runs as a single program.

Discuss this Question

#### 19. Which of the following does not use Monolithic Kernel?

- A. Windows 95
- B. Windows 7
- C. Windows 98
- D. Linux

**Answer:** B) Windows 7

#### **Explanation:**

Windows 7 uses hybrid kernels.

Discuss this Question

## 20. The function of \_\_\_\_ is to provide a communication facility between the client programs?

- A. Monolithic kernel
- B. Microkernel
- C. Hybrid Kernels
- D. Nano Kernels

**Answer:** B) Microkernel

#### **Explanation:**

The function of a microkernel is to provide a communication facility between the client programs; it also provides a facility for various services that are running in user space.

Discuss this Question

#### 21. Among monolithic kernel and microkernel which have the larger size?

- A. Monolithic kernel
  - B. Microkernel

Answer: A) Monolithic kernel

#### **Explanation:**

Monolithic kernel size is large as it is complex to design.

Discuss this Question

# 22. Which of the following kernel reduces the level of abstraction provided by operating systems and allows application-level management of hardware resources as much as possible?

- A. Exo Kernels
- B. Hybrid Kernels
- C. Nano Kernels
- D. Monolithic Kernel

**Answer:** A) Exo Kernels

#### **Explanation:**

Exo Kernel reduces the level of abstraction provided by operating systems and allows application-level management of hardware resources as much as possible.

Discuss this Question

### 23. State whether the statement is True or False Interrupts are an important part of computer architecture?

A. True

B. False

Answer: A) True

#### **Explanation:**

True, interrupts are an important part of computer architecture as we know that external devices are comparatively slower than the CPU, so if there is no interruption CPU would waste a lot of time.

Discuss this Question

#### 24. \_\_\_ refers to putting data of various I/O jobs in the buffer.

- A. Spooling
  - B. Memory Buffer
  - C. Processors

**Answer:** A) Spooling

#### **Explanation:**

Spooling refers to putting data of various I/O jobs in the buffer; this buffer is a special area in memory.

Discuss this Question

#### 25. Which of the following is the main advantage of a microprocessor system?

- A. Increased throughput
- B. Economy of scale
- C. Increased reliability
- D. All of the above

**Answer:** D) All of the above

#### **Explanation:**

Increased throughput, Economy of scale, and increased reliability are the three main advantages of a microprocessor system.

Discuss this Question

26. How many components does the Linux Operating system have	26.	How man	y components	does the	Linux O	perating s	system have	e?
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- A. 4
- B. 2
- C. 3
- D. 5

Answer: C) 3

#### **Explanation:**

Linux Operating system has primarily three components: - Kernel, System library, system utility.

Discuss this Question

### 27. A collection of the node which contains the information about all the files is known as \_\_\_\_?

- A. Files
- B. File management
- C. Directory

**Answer:** C) Directory

#### **Explanation:**

A collection of the node which contains the information about all the files is known as a directory.

Discuss this Question

#### 28. Which of the following activities are managed by disk management \_\_\_\_?

A. Free space management

- B. Storage allocation
- C. Disk scheduling
- D. All of the above

Answer: D) All of the above

#### **Explanation:**

Free space management, Storage allocation, and Disk scheduling are the activities that are managed by disk management.

Discuss this Question

#### 29. Directory system can be classified into how many types?

- A. 3
- B. 5
- C. 6
- D. 2

Answer: D) 2

#### **Explanation:**

The directory system can be classified into single-level and hierarchical directory systems.

Discuss this Question

### 30. In \_\_\_\_ there is a root directory that has all files, there are no subdirectories?

- A. Single level directory system
- B. Hierarchical directory system

**Answer:** A) Single level directory system

#### **Explanation:**

In Single level directory system there is a root directory that has all files. It has a simple architecture and there are no subdirectories.

# 31. Which of the following method of disk space allocation requires all blocks of a file to be kept together contiguously, also performance is fast in this method?

- A. Linked Allocation
- B. Contiguous Allocation
- C. File Allocation

**Answer:** B) Contiguous Allocation

#### **Explanation:**

Contiguous Allocation method requires all blocks of a file to be kept together contiguously; also performance is fast in this method.

Discuss this Question

### 32. Which of the following method of disk space allocation involves no external fragmentation and is only efficient for sequential access files?

- A. Linked Allocation
- B. Contiguous Allocation
- C. File Allocation

Answer: A) Linked Allocation

#### **Explanation:**

Linked allocation method involves no external fragmentation and it is only efficient for sequential access files.

Discuss this Question

### 33. State whether the given statement is True or False - The disk scheduling algorithm that gives a minimum average seek time is better?

- A. True
- B. False

**Answer:** A) True

#### **Explanation:**

Seek time is the time taken by the head to move from the current track to the one where data is present, so the disk scheduling algorithm that gives a minimum average seek time is better.

Discuss this Question

### 34. State whether the given statement is True or False - Seek time always greater than Disk access time?

- A. True
- B. False

Answer: B) False

#### **Explanation:**

Disk access time is the time required by the computer to process a read/write request and retrieve the data, so Seek time is always less than Disk access time.

Discuss this Question

#### 35. What is the formula to find disk access time?

- A. Disk Access time=Seek time +Rotational latency +transfer time
- B. Disk Access time=Seek time-Rotational latency+ transfer time
- C. Disk Access time=Seek time-Rotational latency-transfer time
- D. Disk Access time=Seek time+ Rotational latency/transfer time

**Answer:** A) Disk Access time=Seek time +Rotational latency +transfer time

#### **Explanation:**

Disk Access time=Seek time +Rotational latency +transfer time

Discuss this Question

### 36. A part of a computer program that performs a well-defined task is known as a \_\_\_\_?

- A. Software
- B. Process
- C. Algorithm

**Answer:** C) Algorithm

#### **Explanation:**

A part of a computer program that performs a well-defined task is known as an algorithm.

Discuss this Question

### 37. A collection of computer programs, libraries, and related data are referred to as\_\_\_\_?

- A. Software
- B. Process
- C. Algorithm

**Answer:** A) Software

#### **Explanation:**

A collection of computer programs, libraries, and related data are referred to as software.

Discuss this Question

#### 38. What are schedulers?

- A. Schedulers are the special software that handles process scheduling in various ways
- B. Schedulers are the processes that manage queues
- C. Schedulers are the system that schedules the processes

**Answer:** A) Schedulers are the special software that handles process scheduling in various ways

#### **Explanation:**

Schedulers are the special software that handles process scheduling in various ways.

### 39. How many types of schedulers are there?

- A. 5 types
- B. 3 types
- C. 2 types
- D. 4 types

**Answer:** B) 3 types

#### **Explanation:**

There are 3 types of schedulers: Long term schedulers, short-term schedulers, Medium term schedulers.

Discuss this Question

#### 40. Long-term schedulers are also known as ?

- A. Fix scheduler
- B. Duration scheduler
- C. Job scheduler
- D. CPU scheduler

Answer: C) Job scheduler

#### **Explanation:**

Long-term schedulers are also known as job schedulers.

Discuss this Question

### 41. Primary objective of job scheduler \_\_\_\_?

- A. The primary objective of a job scheduler is to provide a balanced mix of jobs
- B. The primary objective of the job scheduler is to increase system performance in accordance with the chosen set of criteria
- C. The primary objective of the job scheduler is to suspend the processes

D. The primary objective of the job scheduler is to decrease the traffic of processes

**Answer:** A) The primary objective of a job scheduler is to provide a balanced mix of jobs

#### **Explanation:**

Long Primary objective of a job scheduler is to provide a balanced mix of jobs, such as I/O bound and processor bound.

Discuss this Question

#### 42. What is the other name of the short-term scheduler?

- A. Fix scheduler
- B. Duration scheduler
- C. Job scheduler
- D. CPU scheduler

Answer: D) CPU scheduler

#### **Explanation:**

The other name for the short-term scheduler is CPU scheduler also dispatchers.

Discuss this Question

#### 43. What is the Primary objective of CPU scheduler \_\_\_?

- A. The primary objective of the CPU scheduler is to provide a balanced mix of jobs
- B. The primary objective of the CPU scheduler is to increase system performance in accordance with the chosen set of criteria
- C. The primary objective of the CPU scheduler is to suspend the processes
- D. The primary objective of the CPU scheduler is to decrease the traffic of processes

**Answer:** B) The primary objective of the CPU scheduler is to increase system performance in accordance with the chosen set of criteria

#### **Explanation:**

The primary objective of the CPU scheduler is to increase system performance in accordance with the chosen set of criteria.

Discuss this Question

### 44. Among the long-term scheduler and short-term scheduler which is faster?

- A. Long term scheduler
- B. Short term scheduler

**Answer:** B) Short term scheduler

#### **Explanation:**

Short-term schedulers are faster than long-term schedulers.

Discuss this Question

### 45. How many types of process states are there?

- A. 5
- B. 6
- C. 3
- D. 2

Answer: A) 5

#### **Explanation:**

There are 5 states of processes: new, running, waiting, ready, and terminated.

Discuss this Question

#### 46. Instructions are executed in which state?

- A. New
- B. Running
- C. Waiting

- D. Ready
- E. Terminated

**Answer:** B) Running

#### **Explanation:**

Instructions are executed in a running state.

Discuss this Question

#### 47. At which state the process is waiting to be assigned to a processor?

- A. New
- B. Running
- C. Waiting
- D. Ready
- E. Terminated

**Answer:** D) Ready

#### **Explanation:**

When the process is in a ready state, it waits to be assigned to a processor.

Discuss this Question

### 48. What is pre-emption?

- A. In Pre-emption, the process is forcefully removed from the CPU
- B. In Pre-emption, the processes are not removed until they complete the execution

Answer: A) In Pre-emption, the process is forcefully removed from the CPU

#### **Explanation:**

In Pre-emption, the process is forcefully removed from the CPU.

Discuss this Question

#### 49. What is Non-pre-emption?

- A. In Non-Pre-emotion, the process is forcefully removed from the CPU
- B. In Non-Pre-emption, the processes are not removed until they complete the execution

**Answer:** B) In Non-Pre-emption, the processes are not removed until they complete the execution

#### **Explanation:**

In Non-Pre-emption, the processes are not removed until they complete the execution.

Discuss this Question

#### 50. What is PCB (Process control block)?

- A. A PCB just contains the information of terminated processes
- B. A PCB just contains information about new processes
- C. A PCB contains the information of processes that are in waiting for the state
- D. A PCB contains information about the process, i.e. registers

**Answer:** D) A PCB contains information about the process, i.e. registers

#### **Explanation:**

A PCB contains information about the process, i.e. registers

Discuss this Question

# 51. In priority CPU scheduling, the process with a larger CPU burst has \_\_\_\_ priority.

- A. Lower
- B. Higher

**Answer:** A) Lower

#### **Explanation:**

In priority CPU scheduling, the process with a larger CPU burst has lower priority and vice versa.

Discuss this Question

### 52. Which algorithm is best when there are equal qualities of processes in the queue?

- A. First Come First Serve
- B. Round Robin Scheduling
- C. Shortest Job First
- D. Priority CPU Scheduling

Answer: B) Round Robin Scheduling

#### **Explanation:**

Round Robin scheduling algorithm is best when there are equal qualities of processes in the queue.

Discuss this Question

### 53. Which of the following states the correct - difference between the process and thread?

- i. A thread is a program in execution while a process is a flow of control within a thread
- ii. A process is a program in execution while a thread is a flow of control within a process
- iii. A thread does not share the CPU as processes do
- iv. Threads share the CPU as processes do

Select the correct answer.

- A. Only (i)
- B. Only (iii)
- C. Both (i) and (iii)
- D. Both (ii) and (iv)

**Answer:** D) Both (ii) and (iv)

#### **Explanation:**

A process is a program in execution while a thread is a flow of control within a process also; Threads share the CPU as processes do.

Discuss this Question

#### 54. \_\_\_ memory is placed between the CPU and the main memory.

- A. Virtual memory
- B. ROM
- C. RAM
- D. Cache

Answer: D) Cache

#### **Explanation:**

Cache memory is placed between the CPU and the main memory.

## 55. \_\_\_ Address is an actual location in main memory whereas \_\_\_address is a reference to a memory location.

- A. Absolute address and physical address
- B. Physical address and virtual address
- C. Virtual address and logical address

**Answer:** B) Physical address and virtual address

#### **Explanation:**

Physical address is an actual location in main memory whereas virtual address is a reference to a memory location. (Virtual address is also known as a logical address).

### 56. The run-time mapping from virtual to physical addresses is done by which hardware device?

- A. Chipset
- B. CPU
- C. Memory management unit
- D. Physical address and virtual address

Answer: C) Memory management unit

#### **Explanation:**

The run-time mapping from virtual to physical addresses is done by the Memory management unit.

#### 57. What is swapping?

- A. Moving the threads from one software to another is called swapping
- B. Swapping is just replacing a process
- C. Moving a process from main memory to disk and vice versa is known as swapping
- D. Shifting the process and threads directly into the disk is called swapping

**Answer:** C) Moving a process from main memory to disk and vice versa is known as swapping

#### **Explanation:**

Moving a process from main memory to disk and vice versa is known as swapping.

### 58. \_\_\_ is a memory management scheme that removes the requirement of contiguous allocation of physical memory?

- A. Paging
- B. Swapping
- C. Segmentation
- D. Fragmentation

**Answer:** A) Paging

#### **Explanation:**

Paging is a memory management scheme that removes the requirement of contiguous allocation of physical memory.

## 59. \_\_\_ is a technique that allows the execution of the process that may not be completely in memory?

- A. Virtual memory
- B. Segmentation
- C. Memory management unit
- D. Cache

**Answer:** A) Virtual memory

#### **Explanation:**

Virtual memory is a technique that allows the execution of a process that may not be completely in memory.

## 60. \_\_\_ controls the execution of processes running concurrently so as to produce consistent results?

- A. Process asynchronization
- B. Process synchronization

**Answer:** B) Process synchronization

#### **Explanation:**

Process synchronization controls the execution of processes running concurrently so as to produce consistent results.

Discuss this Question

#### 61. Why do we need process synchronization?

- A. To avoid some of the processes
- B. For the easy transfer of process from disk to memory
- C. To avoid the inconsistent result

**Answer:** C) To avoid the inconsistent result

#### **Explanation:**

To avoid the inconsistent result, we need process synchronization.

Discuss this Question

#### 62. What is the critical section?

- A. It is the part of the process which is being executed for so long
- B. It is the part of the thread which is going to be terminated
- C. It is the part of the program where shared resources are accessed by the process

D. It is the part of the program where different processes are shared

**Answer:** C) It is the part of the program where shared resources are accessed by the process

#### **Explanation:**

Critical section is the part of the program where shared resources are accessed by the process. If multiple processes access the critical section concurrently, then the results produced might be inconsistent.

- 63. If multiple processes access the critical section concurrently, then the results produced might be inconsistent. These types of problem are commonly known as \_\_\_\_.
  - A. Process synchronization problems
  - B. Process mechanism problems
  - C. Critical section problem
  - D. Mutual exclusion

Answer: C) Critical section problem

#### **Explanation:**

If multiple processes access the critical section concurrently, then the results produced might be inconsistent. This problem is called a Critical section problem.

### 64. Among the four criteria for synchronization mechanism which of the two criteria are mandatory?

- A. Mutual Exclusion and Progress
- B. Progress and Architectural neural
- C. Bounded wait and mutual exclusion
- D. Bounded wait and progress
- E. Architectural neural and bounded wait

**Answer:** A) Mutual Exclusion and Progress

#### **Explanation:**

Mutual Exclusion and Progress are the mandatory criteria. They must be fulfilled by all the synchronization mechanisms.

### 65. \_\_\_ allows I/O devices to access memory directly without the participation of the processor.

- A. DMA
- B. DMA Controller
- C. Data Controller
- D. Device drivers

Answer: B) DMA Controller

#### **Explanation:**

DMA controller allows I/O devices to access memory directly without the participation of the processor.

Discuss this Question

#### 66. Data transfer to and from the peripherals can be done in how many ways?

- A. 2 ways
- B. 3 ways
- C. 4 ways
- D. 6 ways

Answer: B) 3 ways

#### **Explanation:**

Data transfer to and from the peripherals can be done in three ways Programmed I/O, Interrupt- initiated I/O, and Direct memory access (DMA).

Discuss this Question

#### 67. What is DMA?

- A. Direct memory access method of data transfer between main memory and peripheral devices
- B. Direct memory access method of data transfer between main memory and other devices
- C. Direct memory access method of data transfer between chip units memory and main memory

**Answer:** A) Direct memory access method of data transfer between main memory and peripheral devices

#### **Explanation:**

Direct memory access method of data transfer between main memory and other devices.

### 68. Whenever an I/O device wants to transfer the data to or from memory, it sends the DMA request (DRQ) to the \_\_\_\_.

- A. DMA
- B. DMA Controller
- C. Data Controller
- D. Device drivers

**Answer:** B) DMA Controller

#### **Explanation:**

Whenever an I/O device wants to transfer the data to or from memory, it sends the DMA request (DRQ) to the DMA controller accepts this DRQ, and asks the CPU to hold for a few clock cycles.

### 69. The address of the I/O device that wants to read or writes data. Is stored in the \_\_\_\_.

- A. Chip units
- B. DMA Controller
- C. Data registers
- D. Device drivers

**Answer:** C) Data registers

#### **Explanation:**

The address of the I/O device that wants to read or writes data is stored in the data registers.

#### 70. Which of the type of OS reads and reacts in terms of actual time?

- A. Batch OS
- B. Quick Sharing OS

- C. Time Sharing OS
- D. Real Time OS

**Answer:** D) Real Time OS

#### **Explanation:**

The Real Time OS reads and reacts in terms of actual time.

### 71. DMA controller transfers the block of data to and from memory in how many ways?

- A. 2 ways
- B. 3 ways
- C. 4 ways
- D. 6 ways

Answer: B) 3 ways

#### **Explanation:**

Burst mode, cycle steal mode, and transparent mode are the three modes in which the DMA controller transfers the block of data to and from memory.

### 72. \_\_\_is the ability of a database to allow multiple Processes to affect multiple transactions?

- A. Transactions
- B. Concurrency
- C. Semaphores
- D. Normalization

**Answer:** B) Concurrency

#### **Explanation:**

Concurrency is the ability of a database to allow multiple Processes to affect multiple transactions.

#### 73. Which of the following problem is faced during concurrency?

A. The fundamental problem in concurrency is processes interfering with each other while accessing a shared global resource

- B. The ability to offer concurrency is unique to databases
- C. Only A
- D. Only B
- E. Both A and B

Answer: C) Only A

#### **Explanation:**

The fundamental problem in concurrency is processes interfering with each other while accessing a shared global resource.

#### 74. \_\_\_is simply a variable that is non-negative and shared between threads.

- A. Critical variable
- B. Semaphore
- C. Process variable
- D. Global variable

**Answer:** B) Semaphore

#### **Explanation:**

Semaphore is simply a variable that is non-negative and shared between threads.

### 75. State whether the statement is true or false - Semaphore always holds a non-negative integer value.

- A. True
- B. False

Answer: A) True

#### **Explanation:**

Semaphore is simply a variable that is non-negative always.

#### 76. How many types of semaphores are there?

- A. 2 types
- B. 3 types
- C. 5 types
- D. 6 types

**Answer:** A) 2 types

#### **Explanation:**

The two common kinds of semaphores are: Counting semaphores, Binary semaphores.

### 77. Which type of Semaphore uses a count that helps tasks to be acquired or released numerous times?

- A. Counting semaphores
- B. Binary semaphores

**Answer:** A) Counting semaphores

#### **Explanation:**

Counting semaphores are a type of Semaphore that uses a count that helps a task to be acquired or released numerous times.

### 78. In which semaphore, the wait operation works only if semaphore = 1, and the signal operation succeeds when semaphore = 0?

- A. Counting semaphores
- B. Binary semaphores

**Answer:** B) Binary semaphores

#### **Explanation:**

In binary semaphore, the wait operation works only if semaphore = 1, and the signal operation succeeds when semaphore = 0.

## 79. Among counting semaphores and binary semaphores which semaphore is easy to implement?

- A. Counting semaphores
- B. Binary semaphores
- C. Both A and B
- D. None of the above

**Answer:** B) Binary semaphores

#### **Explanation:**

Binary semaphore is easy to implement, as their value is restricted to 0 and 1.

#### 80. Processes can communicate with each other using \_\_\_ and \_\_\_.

- A. Shared Memory and Message Passing
- B. Shared Memory and Data controller
- C. DMA and DMA controller
- D. Devices drivers and other peripherals

Answer: A) Shared Memory and Message Passing

#### **Explanation:**

Shared Memory and Message passing are the two methods in which processes communicate with each other.

### 81. \_\_\_\_ is a situation where each of the computer processes waits for a resource that is being assigned to another process.

- A. Deadlock
- B. Starvation
- C. Inversion
- D. Aging

**Answer:** A) Deadlock

#### **Explanation:**

Deadlock is a situation where each of the computer processes waits for a resource that is being assigned to another process, in this situation, none of the processes gets executed.

#### 82. Which of the following conditions causes a deadlock situation?

- A. Mutual Exclusion
- B. Hold and Wait
- C. No Preemption
- D. Circular Wait
- E. All of the above

**Answer:** E) All of the above

#### **Explanation:**

Deadlock can arise if four conditions hold simultaneously: Mutual Exclusion, Hold and Wait, No Preemption, and Circular Wait.

- 83. State whether the statement is true or false? Deadlocks can be prevented by preventing at least one of the four conditions: Mutual Exclusion, Hold and Wait, No Preemption, and Circular Wait.
  - A. True
  - B. False

Answer: A) True

#### **Explanation:**

Deadlocks can be prevented by preventing at least one of the four conditions: Mutual Exclusion, Hold and Wait, No Preemption, and Circular Wait because all these four conditions are required simultaneously to cause deadlock.

- 84. When all the low priority processes got blocked, while the high priority processes execute then this situation is termed as \_\_\_\_.
  - A. Deadlock
  - B. Starvation
  - C. Inversion
  - D. Aging

**Answer:** B) Starvation

#### **Explanation:**

When all the low priority processes got blocked, while the high priority processes execute then this situation is termed starvation.

- 85. Is starvation an infinite process?
  - A. True
  - B. False

Answer: B) False

#### **Explanation:**

No, starvation is long but not an infinite process whereas deadlock is an infinite process.

#### 86. The occurrence of deadlock can be detected by the \_\_\_\_.

- A. Long term scheduler
- B. Medium Scheduler
- C. Resource Scheduler
- D. Short term scheduler

**Answer:** C) Resource Scheduler

#### **Explanation:**

The occurrence of deadlock can be detected by the resource scheduler.

#### 87. Every starvation is a deadlock?

- A. Strongly agree
- B. Strongly disagree
- C. Not necessary
- D. Not possible

**Answer:** C) Not necessary

#### **Explanation:**

It is not necessary that every starvation is a deadlock.

### 88. Which of the following algorithm is commonly known as the deadlock avoidance algorithm?

- A. Round robin
- B. Banker's algorithm
- C. Shortest job first
- D. First come First Serve

**Answer:** B) Banker's algorithm

#### **Explanation:**

Banker's algorithm is commonly known as the deadlock avoidance algorithm

89. \_\_\_\_ is a condition that takes place when two or more programs change their state continuously, with neither program making progress.

- A. Live Lock
- B. Dead Lock
- C. Aging
- D. None of the above

**Answer:** A) Live Lock

#### **Explanation:**

Live lock is a condition that takes place when two or more programs change their state continuously, with neither program making progress.

#### 90. What causes the condition of starvation?

- A. It occurs due to uncontrolled priority and preemption
- B. It occurs due to uncontrolled mutual exclusion and resource management
- C. It occurs due to the uncontrolled priority and resource management
- D. All of the above

**Answer:** C) It occurs due to the uncontrolled priority and resource management

#### **Explanation:**

Starvation occurs due to uncontrolled priority and resource management.

#### 91. Whenever a process needs I/O to or from a disk it issues a \_\_\_\_.

- A. System call to the operating system
- B. Separate directory structure
- C. Only A
- D. Only B
- E. Both A and B

Answer: C) Only A

#### **Explanation:**

Whenever a process needs I/O to or from a disk it issues a System call to the operating system.

#### 92. Which system call creates the new process in Linux?

- A. Create
- B. Fork
- C. Exec

D. vfork
Answer: B) Fork
Explanation:
In Linux, the Fork system call creates a new process.
93. If no frames are free how many page transfers are required?
A. 3 B. 4 C. 2 D. 5  Answer: C) 2
Explanation:
If no frames are free then 2-page transfers are required
94. If a process is spending a lot of time paging than executing then this situation is known as
<ul><li>A. Aging</li><li>B. Thrashing</li><li>C. Live lock</li><li>D. None of the above</li></ul>
Answer: B) Thrashing
Explanation:
If a process is spending a lot of time paging than executing then this situation is known as thrashing.
95. Each entry is a segment table that has a
<ul><li>A. Segment base</li><li>B. Segment value</li><li>C. Segment length</li><li>D. Segment peak</li></ul>
Answer: A) Segment base

#### **Explanation:**

Each entry is a segment table that has a segment base.

### 96. Which of the following approach is used to recover a process from deadlock?

- A. Preempt resources
- B. Terminate one or more processes involved in the deadlock
- C. Inform the system operator, and allow him/her to take a manual intervention
- D. All of the above

**Answer:** D) All of the above

#### **Explanation:**

Preempt resources, terminate one or more processes involved in the deadlock, Inform the system operator, and allow him/her to take manual intervention all these approaches to recover from deadlock.

#### 97. \_\_\_ is the interface between the command language user and the OS.

- A. Kernel
- B. System Utilities
- C. Shell
- D. None

Answer: C) Shell

#### **Explanation:**

Shell is the interface between the command language user and the OS.

#### 98. The architecture of the Linux system has how many layers?

- A. 3
- B. 4
- C. 2
- D. 5

Answer: B) 4

#### **Explanation:**

Hardware layer, kernel, shell, and utilities are the layers of the Linux system.

### 99. Among network operating systems and distributed operating systems which is more reliable?

- A. Network OS
- B. Distributed OS

Answer: B) Distributed OS

#### **Explanation:**

Distributed OS is more reliable or fault tolerant.

### 100. If a process fails, most operating system write the error information to a

\_\_\_•

- A. New file
- B. Another running process
- C. Log file
- D. None of the mentioned

Answer: C) Log file

#### **Explanation:**

If a process fails, most operating system write the error information to a Log file.



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