** TOP OPERATING SYSTEM INTERVIEW QUESTIONS **

Ques-1 What is operating system?

Ans-1 An operating system is a program that acts as an interface between the computer user and computer hardware is known as operating system.

Ques-2 What are the functions of operating system? Imp

Ans-2
- ⊙ Memory and Processor Management ✓
- ⊙ Providing user interfaces ✓
- ⊙ File Management ✓
- ⊙ Device Management ✓
- ⊙ Security ✓

Ques-3 What are different operating Systems? Imp

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Ans-3 ⊙ Batched operating system.

⊙ Distributed operating system.

⊙ Timesharing operating system.

⊙ Multi-programmed operating system.

⊙ Real-Time

Ques-4 What do you mean by a process? M Imp

Ans-4 An executing program or when a <u>program</u> is under execution is known as Process.

⊙ Operating system Process ✓

⊙ User Process ✓

Ques-5 What is a Program?

Ans-5 Program contains a set of instructions to be performed is known as Program.

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Ques-6 Write some names of operating System?

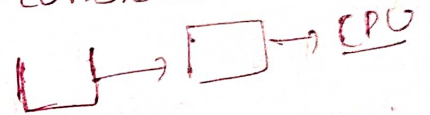Ans-6 ⊙ MS-Window   ⊙ Chrome OS

     ⊙ Mac OS   ⊙ Android

     ⊙ Ubuntu

Ques-7 What are the different types of operating
system?   (Repeat) → Not consider it

Ans-7 Types of operating System:-

1. Batch OS
2. Multi-Programmed OS
3. Time sharing OS
4. Distributed OS
5. Real-Time OS

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Ques-8 What are the benefits of Multiprocessor system?

Ans-8 A Multiprocessor system is a type of system that includes two or more CPUs. It involves the processing of different computer programs at the same time.

Benefits:-

⇒ To improve performance.

⇒ Greater number of tasks can be completed in unit time
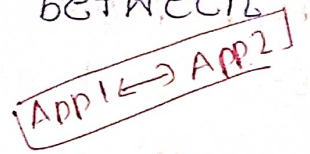
⇒ Maximum throughput.

Ques-6 What is GUI?

Ans-6 GUI stands for Graphical User Interface is a basically type of user interface that allows users to use graphics to interact with the operating system.

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Ques-7 What is a socket?

Ans-7 A socket is used to make connection between two application is known as socket.
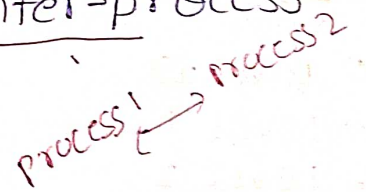
[App1 ⟷ App2]

Ques-8 What is a real-time system?

Ans-8 Real Time system is used in case when rigid - time Requirements. It contains a well defined and fixed-time constraints.

Ques-9 What is a Pipe and when it is used? M.IMP

Ans-9 The pipe is used to connection among two or more process that are interrelated to each other It is mechanism which is used for Inter-process communication using message passing.

Process1 ⟷ Process2

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Ques-10 What are the different kinds of operation that are possible on semaphore?

Ans-10 ⊙ wait()

⊙ signal()

Ques-11 What is RAID structure in OS? What are different levels of RAID configuration?

Ans-11 RAID (Redundant Array of Independent Disks) →Full Form

is a method used to store data on multiple hard disks. It is used to improve the overall performance and reliability.

Different Levels :-

⊙ Level 0
⊙ Level 1
⊙ Level 2
⊙ Level 3
⊙ Level 4

⊙ Level 5
⊙ Level 6

Ques-12 What is a process? What are different State of process?

Ans-12 A process is basically a program under execution. M.M.JMP

State of process :-

⊙ New state :- In this state, a process is just created.
⊙ Running :- CPU working on process instructions.
⊙ Waiting :- Wait for some event.
⊙ Ready :- Process is ready to run.
⊙ Terminate :- Process is completed.

Ques-13 What is Reentrancy? Imp

Ans-13 Reentrant is simply a function in which various clients can use and shares a single copy of program during a similar period.

Ques-14 What is a thread? M.Imp

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Ans-14 A thread is a path of execution within a process. A process can contain multiple threads.
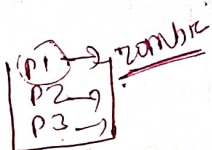
Ques-15 What is Banker's Algorithm?

Ans-15 It is a Resource Allocation and deadlock avoidance algorithm is known as Banker's Algorithm.

Ques-16 What is IPC?

Ans-16 IPC stands for Inter Process Communication is a mechanism that allows processes to communicate with each other.

Ques-17 What is zombie process? M.IMP

Ans-17 A process that has finished the execution but still has an entry in process table is known as the zombie process.
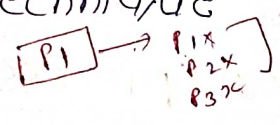
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Ques-18 What are orphan processes? IMP

Ans-18 A processes whose parent process no more exist is known as orphan process.

Ques-19 What is difference between paging and segmentation? M.M.IMP.

Ans-19 Paging :- It is a non-contiguous allocation technique that divides each process in form of pages.

$P_1 \rightarrow \begin{bmatrix} P_1x \\ P_2x \\ P_3x \end{bmatrix}$

segmentation :- It is a memory management technique that divides process into modules. These modules are known as segments.

Ques-20 What is thrashing in OS? IMP

Ans-20 It is generally a situation where the CPU performs less productive work and more swapping or paging work. It spends more time swapping or paging activities rather than execution.

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Ques-21 What is difference between multitasking and multiprocessing in OS?
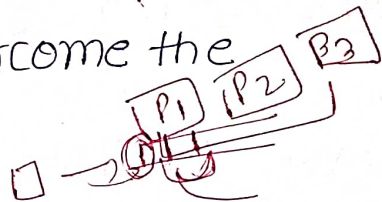
Ans-21 <u>Multitasking</u> : It is a system that works on <u>more</u> than one task at one time by rapidly switching between various tasks is known as Multitasking. CPU→1

<u>Multiprocessing</u> :- It is a system that allows multiple or various processor in a computer to process two or more different portions of same program simultaneously. CPU→10

Ques-22 What is starvation and aging in OS ? M.Imp

Ans-22 <u>Starvation</u> :- It is a process occurs when a process has not been able to get the required resources. → P1, P2, P3

<u>aging</u> :- It is a technique that is used to overcome the situation or problem of starvation. P1 P2 P3

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Ques-23 What is the semaphore m OS ?

Ans-23 semaphore is a mechanism. It holds one positive integer value. It is used to solve the problem or issue of critical section. operation:- wait() and signal().

Ques-24 What is kernel and write its functions ? [vimp.

Ans-24 kernel is basically a computer program considred as a central component of OS. It is responsible for handling managing and controlling all operations.

Types of Kernel :-

* Monolithic Kernel
* Micro Kernel
* Hybrid Kernel
* Nono Kernel
* EXO Kernel

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Ques-25 What is the purpose of device driver?

Ans-25 Device drivers are software components that allow the operating system to communicate with and control hardware devices.

Ques-26 What is role of bootloader in boot process? M.Imp

Ans-26 Bootloder is small program that loads the operating system into the memory and starts its execution is known as the Bootloader.

Ques-27 What is the difference between 32 bit and 64-bit operating system?

Ans-27 The main difference is the size of memory address A 32 bit OS can address upto 4GB ram While 64-bit OS can access much larger amount of RAM. 64-bit system also offer better performance for application.

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Ques-28 What is Context Switching ?

Ans-28 Context Switching is a process of saving the context of one process and loading the context of another process is known as Context Switching.

Ques-29 What is Deadlock in OS ? M.I.Imp

Ans-29 Deadlock is a situation where two or more process are waiting for each other is known as Deadlock.
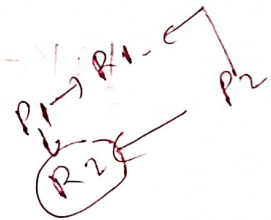
Ques-30 What are Necessary conditions for a deadlock ? M.M.Imp

Ans-30 ⊙ Mutual Exclusion ✓

⊙ Hold and Wait ✓

⊙ No Premption ✓

⊙ Circular Wait ✓

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Ques-31 What do you mean by Belady's Anomaly?

Ans-31 Belady's Anomaly is experienced when we use FIFO (First in First out) page replacement Algorithm. It is a phenomenon in which if we increase the number of frames in memory, then the number of page Faults also increases.

$$\left[\frac{No \cdot of\ Frames}{5} \propto \frac{No\ of\ Page\ Fault}{5} \right]$$

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