Operating System Short Question And Answer Set-1

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1.What is an operating system?
An operating system is a program that manages the computer hardware. it act as an intermediate between a users of a computer and the computer hardware. It controls and coordinates the use of the hardware among the various application programs for the various users.

2.What is the kernel?
A more common definition is that the OS is the one program running at all times on the computer ,usually called the kernel, with all else being application programs.

3.What are batch systems?
Batch systems are quite appropriate for executing large jobs that need little interaction. The user can submit jobs and return later for the results. It is not necessary to wait while the job is processed.

4.What is graceful degradation?
In multiprocessor systems, failure of one processor will not halt the system, but only slow it down by sharing the work of failure system by other systems. This ability to continue providing service is proportional to the surviving hardware is called graceful degradation.

5.Differentiate Tightly coupled systems and loosely coupled systems?
Loosely coupled systems Tightly coupled systems Each processor has its own local memory Common memory is shared by many processors Each processor can communicate with other all through communication lines No need of any special communication lines

6.What is real time system?
A real time system has well defined ,fixed time constraints. Processing must be done within the defined constraints, or the system will fail. It is often used as a control device in a dedicated application.

7.What are privileged instructions?
Some of the machine instructions that may cause harm to a system are designated as privileged instructions. The hardware allows the privileged instructions to be executed only in monitor mode.

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8.What do you mean by system calls?
System calls provide the interface between a process and the operating system. When a system call is executed, it is treated as by the hardware as software interrupt.

10.What is a process?
A process is a program in execution. It is an active entity and it includes the process stack,containing temporary data and the data section contains global variables.

11.What is process control block?
Each process is represented in the OS by a process control block. It contain many pieces of information associated with a specific process.

12.What is schedulers?
A process migrates between the various scheduling queues through out its life time. The OS must select processes from these queues in some fashion. This selection process is carried out by a scheduler.

13.What are the use of job queues, ready queues and device queues?
As a process enters a system they are put in to a job queue. This queues consist of all jobs in the system. The processes that are residing in main memory and are ready and waiting to execute are kept on a list called ready queue. The list of processes waiting for a particular I/O devices kept in the device queue.

14.What is meant by context switch?
Switching the CPU to another process requires saving the state of the old process and loading the saved state for the new process. This task is known as context switch.

15.What is independent process?
A process is independent it cannot affect Or be affected by the other processes executing in the system. Any process does not share data with other process is a independent process.

16.What is co-operative process?
A process is co-operating if it can affect or be affected by the other processes executing in the system. Any process that share data with other process is a co-operating process.

17. What are the benefits OS co-operating process?

- Information sharing.
- Computation speed up.
- Modularity.
- Convenience.

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18.How can a user program disturb the normal operation of the system?

- Issuing illegal I/O operation.
- By accessing memory locations with in the OS itself.
- Refusing to relinquish the CPU.

19.State the advantage of multiprocessor system?

- Increased throughput.
- Economy of scale.
- Increased reliability.

20. What is the use of inter process communication.
Inter process communication provides a mechanism to allow the co-operating process to communicate with each other and synchronies their actions without sharing the same address space. It is provided a message passing system.