

1. <b>How are messages passed?</b>	They are passed over a communication link.	11. <b>What is a buffer?</b>	It is a temporary queue that holds messages to be exchanged by communicating processes
2. <b>Is it possible to determine whether a process is I/O or CPU bound?</b>	No but we guess.	12. <b>What is a cooperating process?</b>	A process that can affect other processes and can share data with other processes
3. <b>What are issues of message passing?</b>	Direct vs. Indirect Synchronous vs. Asynchronous Automatic vs. Explicit Buffering	13. <b>What is a mailbox?</b>	An object into which messages can be placed and removed
4. <b>What are the CPU registers of the Process control block?</b>	The registers vary in number and type depending on the computer architecture. They include accumulators, index registers, stack pointers, and general-purpose registers, plus any condition-code information. Along with the program counter, this state information must be saved when an interrupt occurs, to allow the process to be continued correctly afterward.	14. <b>What is an independent process?</b>	Process that have no effect on other processes
5. <b>What are the four types of synchronization? Describe them</b>	Blocking send - sending process is blocked until the message is received : Non-blocking send - same but no blocking : Blocking receive - receiving process is blocked until there is a message : Non-blocking receive - same but no blocking (receive valid message or null)	15. <b>What is a process?</b>	It is an active entity. It can be currently executing or waiting to be executed, but it is active.
6. <b>What are the queues involved with the scheduler?</b>	The Job Queue, Ready Queue, and the Device Queue	16. <b>What is a program?</b>	It is a passive entity. It consists of a set of charged particles on a magnetic media.
7. <b>What are the reasons a parent aborts a child?</b>	Child gone wrong : Child has consumed too many resources : child is useless : child's task is complete : child is an orphan	17. <b>What is a socket? What does it consist of?</b>	This is a connection between two remote machines over the internet : it consist of an ip address and a port number
8. <b>What are three types of sockets and describe them?</b>	TCP - Connection oriented : UDP - Connectionless : Multicast - Broadcast	18. <b>What is considered a CPU Bound process?</b>	Process that does mostly CPU operations Example: graphics, games
9. <b>What does a process consist of?</b>	It consist of the text section (program code), current register values (program counter and all other important registers), process stack (subroutine and other temporary information), and data section (global variables, allocated memory, etc.)	19. <b>What is considered an I/O Bound process?</b>	Process that waits on I/O. Example: client, server, word processor
10. <b>What does the medium term scheduler do?</b>	It removes processes from memory after they execute on the CPU for a while. After a while, it reintroduces them into the ready queue (called swap)	20. <b>What is considered a stable degree of multiprogramming?</b>	The average number of processes entering memory should be the same as the average number of processes leaving memory
		21. <b>What is context switching?</b>	This is when the CPU stops working on one process and begins another. This needs to be kept small because it is pure overhead.
		22. <b>What is direct communication?</b>	One process sends a message and another receives a message.
		23. <b>What is each process represented by in the operating system?</b>	They are represented by a process control block (called a task control block). This includes seven pieces called the process state, program counter, CPU registers, CPU-scheduling information, memory management information, accounting information, and I/O status information.
		24. <b>What is indirect communication?</b>	Messages are sent to and received from mailboxes or ports.

25. <b>What is Interprocess Communication?</b>	AKA IPC and allows communication between different processes
26. <b>What is it called when both send() and receive() are blocking?</b>	Rendezvous
27. <b>What is symmetric communication?</b>	This is where both the sender and the receiver must name each other to communicate.
28. <b>What is the buffer size?</b>	How many objects the consumer can hold
29. <b>What is the CPU-scheduling information of the Process control block?</b>	This information includes a process priority, pointers to scheduling queues and any other scheduling parameters.
30. <b>What is the degree of multiprogramming?</b>	This refers to how many processes are in memory waiting to be run.
31. <b>What is the Device Queue?</b>	The queue of jobs waiting on devices
32. <b>What is the exec() command?</b>	This overwrites the current process with another one.
33. <b>What is the fork() command?</b>	It is a system call that creates a copy of a process.
34. <b>What is the I/O status information of the Process control block?</b>	This information includes the list of I/O devices allocated to the process, a list of open files, and so on.
35. <b>What is the Job Queue?</b>	It is all of the processes in the system
36. <b>What is the long term scheduler?</b>	This takes processes from a mass-storage device and puts them in a ready queue (also called the job scheduler)
37. <b>What is the memory-management information of the Process control block?</b>	This information may include such information as the value of the base and limit registers, the page tables or the segment tables, depending on the memory system used by the operating system.
38. <b>What is the process control block?</b>	This is a table of important information the OS keeps about the process.
39. <b>What is the Process state of the Process control block?</b>	This state may be new, ready, running, waiting, halted, and so on

40. <b>What is the producer/consumer problem?</b>	The producer must not produce unless there is space in the buffer. The consumer can only consume if there is something to be consumed.
41. <b>What is the Program counter of the Process control block?</b>	This is the counter that indicates the address of the next instruction to be executed for this process
42. <b>What is the Ready Queue?</b>	The list of jobs in the ready state
43. <b>What is the short term scheduler?</b>	It selects processes from the ready queue and allocates them to the CPU (also called CPU scheduler)
44. <b>Where can mailboxes be in a system?</b>	Process or OS
45. <b>Why do processes cooperate?</b>	Information Sharing : Computation Speedup : Modularity : Convenience