

1. _____ abstract procedure calls for use between systems with network connections.	Remote Procedure Calls (RPC)	11. What are the two system calls used with message-passing systems?	1. send() 2. receive()
2. How must shared memory behave for a rendezvous to occur?	Both the send() and receive() system calls must be blocking in order for a rendezvous to occur.	12. What are the two types of pipes?	1. Ordinary Pipes 2. Named Pipes
3. Provide at least three possible states a process may be in.	1. New (process creation) 2. Running (instructions are being executed) 3. Waiting *4. Ready *5. Terminated	13. What is another term for process?	Job
4. Provide at least two types of communication mechanisms in client-server systems.	1. Sockets (endpoints for communications) 2. Remote Procedure Calls (RPC) *3. Pipes (a conduit to allow two processes to communicate; implemented in early UNIX systems)	14. What is a Process Control Block(PCB)?	A representation of the process in the operating system, containing the Process state, Program counter, CPU registers, CPU-scheduling information, and Memory management information.
5. TCP sockets are (a) connection-oriented, or (b) connection-less?	(a) connection-oriented	15. What is a process identifier(PID)?	A number, typically an integer, that uniquely identifies a process on a system.
6. True or False? Message passing is typically faster than shared memory?	False	16. What is parameter marshaling?	Packaging the parameters into a form that can be transmitted over a network.
7. True or False? Most operating systems allow a process to have multiple threads.	True	17. What is the degree of multiprogramming?	It is the number of processes in memory.
8. UDP sockets are (a) connection-oriented, or (b) connection-less?	(b) connection-less	18. What is the name of the process that UNIX and Linux systems assign as the new parent of orphan processes?	The init process is assigned as the parent of orphan processes.
9. What are the four components of a process?	1. Stack (contains temporary data such as local variables, return addresses, and function parameters) 2. Heap (memory that is dynamically allocated during process runtime) 3. Data Section (contains global variables) 4. Text Section (program code)	19. What is the role of the process scheduler?	It selects an available process (possibly from a set of several available process) for program execution on the CPU.
10. What are the two fundamental models of interprocess communication?	1. shared memory 2. message passing	20. What is the term that describes saving the state of one process, and restoring the state of another?	Context Switch
		21. What system call creates a process on UNIX systems?	fork()
		22. What system call creates a process on Windows systems?	CreateProcess()
		23. What system call does Mach use to create a new mailbox?	port_allocate()

24.	What system call is used to create a POSIX shared memory object?	shm_open()
25.	What system call terminates a process on UNIX systems?	exit()
26.	What term does Mach use to describe mailboxes?	ports
27.	What term does Windows use to name its message passing facility?	advanced local procedure call(ALPC)