1. **_____ abstract procedure calls for use between systems with network connections.**

Remote Procedure Calls (RPCs)

2. **How must shared memory behave for a rendezvous to occur?**

More of a IPC state - synchronous (blocking) send() and receive(). Trivial producer-consumer solution.

3. **Provide at least three possible states a process may be in.**

New, Running, Waiting, Ready, Terminated

4. **Provide at least two types of communication mechanisms in client-server systems.**

Sockets
Remote Procedure Calls
Pipes

5. **TCP sockets are (a) connection-oriented or (b) connection-less?**

(a) connection-oriented

6. **True or False? Message passing is typically faster than shared memory.**

False
Shared memory faster for single-core, Message passing shown to exhibit better performance for multi-CPU systems.

7. **True or False? Most operating systems allow a process to have multiple threads.**

True

8. **UDP sockets are (a) connection-oriented or (b) connectionless?**

(b) connectionless

9. **What are the four components of a process?**

Stack, Heap, Data, Text (and program counter, processor register)

10. **What are the two fundamental models of interprocess communication?**

Shared memory and Message passing

11. **What are the two system calls used with message-passing systems?**

send(), receive()

12. **What are the two types of pipes?**

Ordinary pipes, Named pipes

13. **What is another term for process?**

Job

14. **What is a Process Control Block (PCB) ?**

A PCB serves as the repository for any information that may vary from process to process. Includes: Process state, Program counter, CPU registers, CPU-scheduling information, Memory-management information, Accounting information, I/O status information.

15. **What is a process identifier (PID)?**

What is a process identifier (PID)? A unique process identifier, typically an integer. Can be used as an index to access various attributes of a process within the kernel.

16. **What is parameter marshaling?**

Packaging parameters into a form that can be sent over a network.

17. **What is the degree of multiprogramming?**

The number of programs in memory. Controlled by the long-term scheduler.

18. **What is the name of the process that UNIX and Linux systems assign as the new parent of orphan processes?**

init (the root of the process hierarchy in UNIX and Linux systems)

19. **What is the role of the process scheduler?**

To select an available process for program execution on the CPU.

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?**

allocate()

24. **What system call is used to configure the size of a POSIX shared memory object?**

ftruncate()

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