

# University-Level Socket Programming Quiz

## 1. What is the primary purpose of a server in socket programming?

- a. To establish connections with multiple servers
- b. To provide some defined service for clients
- c. To act as a firewall for client requests
- d. To block incoming connections

## 2. In socket programming, what are the two classes servers can be categorized into?

- a. Basic and Advanced
- b. Iterative and Concurrent
- c. Primary and Secondary
- d. Public and Private

## 3. Which type of server continues to spawn new servers to handle client requests?

- a. Iterative server
- b. Basic server
- c. Concurrent server
- d. Independent server

## 4. Which type of servers are typically concurrent according to the general rule?

- a. TCP servers
- b. HTTP servers
- c. FTP servers
- d. UDP servers

## 5. What method is used on the server-side to put the server into listening mode?

- a. s.start()
- b. s.connect()
- c. s.listen()
- d. s.receive()

## 6. Which method is used on the client side to actively initiate a TCP server connection?

- a. s.bind()
- b. s.connect()
- c. s.send()
- d. s.accept()

## 7. What is the primary advantage of a concurrent server over an iterative server?

- a. Faster response time for clients
- b. Ability to handle multiple clients concurrently

- c. More secure connections
- d. Lower resource consumption

**8. What does the `socket.bind()` method do in socket programming?**

- a. Closes the connection with the client
- b. **Binds an address to the socket**
- c. Accepts the client connection
- d. Sends the TCP message

**9. Which type of communication can sockets facilitate between processes?**

- a. Unidirectional communication
- b. **Bidirectional communication**
- c. Multidirectional communication
- d. No communication capabilities

**10. What is the purpose of the `socket.listen()` method in socket programming?**

- a. Send messages between clients
- b. Close the socket connection
- c. **Put the server into listening mode**
- d. Handle incoming client requests

**11. Which method creates a bidirectional communication channel in socket programming?**

- a. **`socket.connect()`**
- b. `socket.bind()`
- c. `socket.send()`
- d. `socket.receive()`

**12. When creating a socket object, what does the `socket_type` parameter specify?**

- a. The address family
- b. The port number
- c. **The type of communication**
- d. The hostname

**13. What does the loop in a simple server-client program continuously do?**

- a. Send messages to the server
- b. **Accept incoming client connections**
- c. Close the connection with the client
- d. Spawn new server processes

**14. Which command can be used to connect to a server running on localhost?**

- a. `ssh localhost`
- b. **`telnet localhost port_number`**

- c. connect localhost:port
- d. open localhost

**15. In socket programming, what does the client socket object represent?**

- a. The listening socket
- b. The server socket
- c. The connection socket
- d. The main socket

**16. What is the primary function of the client socket in socket programming?**

- a. Close the connection with the client
- b. Accept incoming client connections
- c. Send and receive data from the server
- d. Spawn new server processes

**17. Which method is used to actively start a TCP server connection on the client side?**

- a. s.listen()
- b. s.accept()
- c. s.connect()
- d. s.send()

**18. What is the main goal of socket programming in network communication?**

- a. Transmitting data securely
- b. Enabling communication between servers only
- c. Establishing direct hardware connections
- d. Allowing nodes on a network to communicate

**19. When using the socket.recv() method, what does the parameter specifying the buffer size represent?**

- a. Maximum number of connections allowed
- b. Maximum number of messages to receive
- c. Maximum size of data to receive at once
- d. Maximum size of the message payload

**20. Which programming language provides support for both low-level and high-level network programming?**

- a. Python
- b. Java
- c. C++
- d. JavaScript

Answer Key (Always review AI generated answers for accuracy - Math is more likely to be inaccurate)

1. b
2. b
3. c
4. a
5. c
6. b
7. b
8. b
9. b
10. c
11. a
12. c
13. b
14. b
15. c
16. c
17. c
18. d
19. c
20. a