

1. In the client-server model of network programming, which process takes the initiative to start communication?

- A. Server
- B. Client
- C. Daemon
- D. Peer

Correct Answer: B

2. Which protocol is specifically listed in the syllabus under Communication Protocols alongside TCP, UDP, and IP?

- A. HTTP
- B. SCTP
- C. FTP
- D. SMTP

Correct Answer: B

3. To make two processes communicate, what is the role of the process that is waiting for communication to be initiated?

- A. Client
- B. Master
- C. Server
- D. Agent

Correct Answer: C

4. What is a core objective of designing a client-server based system according to the syllabus?

- A. Dependency on a specific OS architecture
- B. Communication only within the same system
- C. Ability to communicate across different network platforms
- D. Limitation to local area networks only

Correct Answer: C

5. Which function is used in UNIX programming to create a new process for concurrent servers?

- A. socket()
- B. bind()
- C. fork()
- D. connect()

Correct Answer: C

6. In UNIX programming, which of these is used to manipulate socket options?

- A. ioctl
- B. getsockopt
- C. syslogd

D. exec

Correct Answer: B

7. What type of argument is commonly used in socket address structures to return information from the kernel to the process?

- A. Constant value
- B. Value-result argument
- C. Global variable
- D. Pointer to null

Correct Answer: B

8. Which function is used alongside 'fork' to replace the process image in UNIX programming?

- A. listen
- B. select
- C. exec
- D. accept

Correct Answer: C

9. Which I/O model involves the kernel notifying the process when an operation is completed without blocking the process?

- A. Blocking I/O
- B. Non-blocking I/O
- C. Asynchronous I/O
- D. Signal-driven I/O

Correct Answer: C

10. The 'syslogd' refers to which type of process in a UNIX environment?

- A. Client process
- B. Daemon process
- C. User process
- D. Foreground process

Correct Answer: B

11. Which function is used for controlling file descriptors in UNIX network programming?

- A. setsockopt
- B. fcntl
- C. select
- D. ioctl

Correct Answer: B

12. Which utility is used to display network status and protocol statistics?

- A. ping

- B. ifconfig
- C. Netstat
- D. Telnet

Correct Answer: C

13. In Winsock programming, what is the purpose of "Setup and Cleanup" functions?

- A. To define IP addresses
- B. To initialize and terminate the use of Winsock DLL
- C. To handle concurrent servers
- D. To encrypt data packets

Correct Answer: B

14. Which I/O model uses the 'select' function to monitor multiple descriptors?

- A. I/O Multiplexing
- B. Blocking I/O
- C. Asynchronous I/O
- D. Signal-driven I/O

Correct Answer: A

15. What is the role of Winsock DLL in Windows-based network programming?

- A. It provides a hardware interface
- B. It provides the dynamic link library for socket functions
- C. It acts as a physical router
- D. It manages the CPU scheduling

Correct Answer: B

16. Which network utility is used to configure or view the configuration of a network interface in LINUX?

- A. ipconfig
- B. ifconfig
- C. TFTP
- D. Netsat

Correct Answer: B

17. Which protocol transition is visually represented in the syllabus fundamentals?

- A. UDP transition diagram
- B. TCP state transition diagram
- C. IP routing diagram
- D. SCTP path diagram

Correct Answer: B

18. What is the Windows equivalent of the 'ifconfig' utility mentioned in the syllabus?

- A. Netstat

- B. ipconfig
- C. ping
- D. Telnet

Correct Answer: B

19. Which Winsock function is used to handle database queries in an asynchronous manner?

- A. Asynchronous Database function
- B. Blocking I/O function
- C. Select function
- D. Accept function

Correct Answer: A

20. In UNIX socket programming, what are the two domains mentioned for socket implementation?

- A. LAN and WAN
- B. TCP and UDP
- C. UNIX and Internet
- D. Global and Local

Correct Answer: C

21. Which function is used to perform device-specific control operations in UNIX?

- A. setsockopt
- B. ioctl
- C. fcntl
- D. syslog

Correct Answer: B

22. The objective of Network Programming is to allow processes to communicate across a network or:

- A. Within the same system
- B. Only within a VPN
- C. Without using protocols
- D. Without hardware

Correct Answer: A

23. Byte ordering and manipulation functions are necessary because:

- A. Different systems may have different byte orders (Endianness)
- B. Sockets only support 8-bit data
- C. Winsock does not support integers
- D. TCP requires encrypted bytes

Correct Answer: A

24. Which of these is a Laboratory Exercise mentioned in the syllabus?

- A. Implementing a Web Browser
- B. Implementing ECHO server using C and LINUX
- C. Implementing a Router
- D. Implementing a Firewall

Correct Answer: B

25. Which function is used to pass a file descriptor between processes in UNIX?

- A. fork
- B. exec
- C. Passing file descriptor (via socket calls)
- D. setsockopt

Correct Answer: C

26. Which Winsock feature allows the application to continue processing while a network operation is pending?

- A. Blocking I/O
- B. Asynchronous Operation
- C. Synchronous select
- D. Static Linking

Correct Answer: B

27. The 'select' function can be used in conjunction with which function to handle new incoming connections?

- A. sendto
- B. accept
- C. fcntl
- D. ioctl

Correct Answer: B

28. Which utility is used for "Remote Login" as per the Network Utilities section?

- A. TFTP
- B. Telnet
- C. ping
- D. ifconfig

Correct Answer: B

29. What does the syllabus list as a requirement for "Non-Blocking socket"?

- B. select with recv/recvfrom
- A. Using Non-Blocking with connect
- C. Blocking I/O functions
- D. Syslogd functions

Correct Answer: A

30. Which function is used to send data over a connectionless (UDP) socket in Winsock?

- A. send
- B. sendto
- C. write
- D. transmit

Correct Answer: B

31. How many hours are allocated for UNIX Programming in the course contents?

- A. 6 hrs
- B. 15 hrs
- C. 22 hrs
- D. 2 hrs

Correct Answer: C

32. What is the total marks (Sessional + Final) for the Theory component?

- A. 50
- B. 80
- C. 100
- D. 20

Correct Answer: B

33. Which utility is used to check the reachability of a host on an IP network?

- A. Netstat
- B. ping
- C. TFTP
- D. ifconfig

Correct Answer: B

34. Which laboratory exercise involves communication between different operating systems?

- A. Implementing ECHO server
- B. Implementing Message Exchanger between LINUX and Windows
- C. Implementing Date and Time Routines
- D. Implementing Concurrent Server

Correct Answer: B

35. "Socket Address Structures" are introduced in which section of the syllabus?

- A. Network Programming Fundamentals
- B. UNIX Programming
- C. Winsock Programming
- D. Network Utilities

Correct Answer: B

36. Which I/O model involves the use of signals to notify the process when data is ready?

- A. Blocking
- B. Multiplexing
- C. Signal driven
- D. Asynchronous

Correct Answer: C

37. Which function is used to set options on a socket in UNIX?

- A. getsockopt
- B. setsockopt
- C. fcntl
- D. ioctl

Correct Answer: B

38. Which protocol is used by the TFTP utility mentioned in the syllabus?

- A. TCP
- B. UDP
- C. SCTP
- D. IP

Correct Answer: B

39. What is the purpose of the 'syslog' function?

- A. To create a socket
- B. To log messages to the system logging facility
- C. To change byte ordering
- D. To fork a process

Correct Answer: B

40. Which specific version of UNIX network Programming is listed as a reference book?

- A. Steven, R., VOL-II
- B. Steven, R., VOL-I
- C. Douglas E. Comers, VOL-I
- D. Alok k. Sinha, VOL-I

Correct Answer: B

41. In Winsock, the function 'recv' is used for:

- A. Sending data
- B. Receiving data over a connection
- C. Initializing the DLL
- D. Closing a socket

Correct Answer: B

42. Which section of the course covers "Asynchronous Database function"?

- A. Network Fundamentals

- B. UNIX Programming
- C. Winsock Programming
- D. Network Utilities

Correct Answer: C

43. Which of the following is NOT an I/O model listed in the syllabus?

- A. Blocking
- B. Non-blocking
- C. Parallel I/O
- D. Asynchronous

Correct Answer: C

44. Which utility is listed under "Network Utilities and Application" for file transfer?

- A. Netstat
- B. TFTP
- C. ping
- D. Telnet

Correct Answer: B

45. The laboratory exercise "Implementing Date and Time Routines" is performed in which environment?

- A. Windows
- B. C and LINUX
- C. Java and UNIX
- D. Python and Windows

Correct Answer: B

46. What type of servers are implemented using FORK and EXEC calls in the laboratory?

- A. Iterative Servers
- B. Concurrent Servers
- C. Proxy Servers
- D. Static Servers

Correct Answer: B

47. "Value Result arguments" are specifically associated with:

- A. Winsock DLL
- B. Socket Address Structures
- C. Telnet
- D. TFTP

Correct Answer: B

48. Which function is used for cleanup in Winsock?

- A. socket()

- B. Cleanup Function (WSACleanup)
- C. fcntl()
- D. ioctl()

Correct Answer: B

49. How many hours are allocated for "Network Utilities and Application"?

- A. 6 hrs
- B. 22 hrs
- C. 15 hrs
- D. 2 hrs

Correct Answer: D

50. The syllabus defines Network Programming as:

- A. Client-Server programming
- B. Hardware programming
- C. Kernel-only programming
- D. Standalone programming

Correct Answer: A