

K21U 0194

VI Semester B.C.A., Degree (CBCSS Reg./Supple./Improv.) Examination, April 2021 (2014-2018 Admissions) Core Course (Elective) 6B20BCA : E05 : NETWORK PROGRAMMING

Time : 3 Hours

Max. Marks: 40

PART – A (Short Answer)

1. One Word Answer :

(8×0.5=4)

- a) SCTP stands for _____
- b) Well known ports (0 through 1023) are controlled and assigned by

c) fork system call is used for _____-

d) DNS means _____

e) The default port number for http communication is _____.

- f) A ______ is a notification to a process that an event has occurred.
- g) The purpose of the _____ state is to maintain information about the child for the parent to fetch at some later time.
- h) A ______ I/O operation causes the requesting process to be blocked until that I/O operation completes.

PART – B (Short Essay)

Answer any 7 questions :

 $(7 \times 2 = 14)$

2. Write a short note on UDP.

3. State the purpose of SO_REUSEADDR and SO_REUSEPORT Socket options.

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- 4. What are the reasons for TIME-WAIT state ?
- 5. Write a note on Termination of a Server Process.
- 6. Define Socket Pair for a TCP connection.
- 7. List out the information maintained by Zombie State.
- 8. Explain IPV6 Socket address structure.
- 9. Write a note on str_echo() function.
- 10. How TCP NODELAY option is used while sending small packets ?
- 11. Write a program to determine host byte order.
- 12. Explain the syntax and purpose of str_cli() function.
- 13. Explain the relationship among six exec functions.
- 14. How a client running on IPV4 configured host communicate with a server in IPV6 host ?
- 15. Explain the syntax and use of gethostbyaddr function.

PART – C (Essay)

Answer any 4 questions :

 $(4 \times 3 = 12)$

Explain about the three way handshake TCP connection establishment.

17. Explain in detail about concurrent servers.

- 18. Write a note on the queues maintained by TCP for listening socket.
- 19. Distinguish getsockname and getpeername functions.
- 20. Explain about Raw Socket creation.
- Explain the syntax and use of getaddrinfo function.
- 22. Write a note on tcp_listen function.
- 23. State and explain socket function for TCP.

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PART – D (Long Essay)

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Answer any 2 questions :

(2×5=10)

24. Explain about a simple Daytime Server.

25. Explain the various TCP/IP protocols.

26. Explain about socket options in detail.

27. Explain in detail about DNS.

28. Explain the syntax and use of functions : socket, connect and bind.

29. Explain the various UDP server side system calls and getsocket, setsocket functions in detail.