## TDC (CBCS) Even Semester Exam., 2023

# COMPUTER SCIENCE

## ( Honours )

### ( 4th Semester )

Course No. : CSCHCC–401T

### ( Computer Network )

_Full Marks_ : 70

_Pass Marks_ : 28

_Time_ : 3 hours

_The figures in the margin indicate full marks
for the questions_

## SECTION—A

Answer any _ten_ of the following questions : 2×10=20

1.  Differentiate between half duplex and full duplex mode of communication.

2.  What do you mean by physical address and logical address?

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( Turn Over )

3. Give two examples of unguided media.

4. What are the two approaches of pocket switching?

5. Write full forms of ADSL, VDSL, HDSL and SDSL.

6. Differentiate between CATV and HFC.

7. What is Hamming distance?

8. What is piggybacking?

9. What is repeater?

10. Define IP address with example.

11. What are net-id and host-id?

12. Write the difference between static routing table and dynamic routing table.

13. Write any two uses of UDP.

14. What are the two ways a name space can be organized?

15. What is proxy server?

( Continued )

SECTION—B

Answer any *five* of the following questions : 10×5=50

16. Explain different types of physical topologies with suitable diagram.

17. (a) Discuss different types of transmission mode.                    5

    (b) Explain the classification of transmission media.          5

18. Explain in detail the Virtual Circuit Network and its three phases.

19. (a) Write a short note on dial-up modems.      5

    (b) What are CM and CMTS? Discuss the data transmission scheme DOCSIS.     5

20. (a) Discuss the two types of errors.       3

    (b) Explain error detection and error correction in block coding.          7

21. (a) Explain Go-back-N-ARQ protocol.          5

    (b) Discuss backbone networks.              5

( Turn Over )

22. (a) A block of address is granted to a small organization having one of the addresses as 205.16.37.39/28.

    (i) What is the first address in the block?

    (ii) What is the last address in the block?

    (iii) Find the number of addresses.   6

  (b) Write a short note on IPv6 address.   4

23. (a) Explain Link-state routing.   5

  (b) Discuss in brief the different types of errors handled in ICMP.   5

24. (a) Differentiate between UDP and TCP.   3

  (b) Discuss the flags used in the control field of TCP.   5

  (c) What is the length of user datagram and UDP header?   2

25. (a) What is an URL and what are its different components?   3

  (b) Explain HTTP transaction.   4

  (c) Discuss the different types of domain.   3

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