

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
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17216(N)

B. Tech 5th Semester Examination

Computer Networks (CBS)

CS-501

Time : 3 Hours **www.epaper.tk** **Max. Marks : 60**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all selecting one question from each of the section A, B, C and D of the question paper and all the subparts of the section E.

SECTION - A

1. (a) Define protocol architecture. Explain TCP/IP model. (6)
(b) Explain various transmission modes used in computer networks. (6)
2. (a) With relevant examples differentiate between simplex, half duplex and full duplex communication. (3)
(b) What is the difference between a protocol and a service interface? (3)
(c) Explain different multiplexing techniques with example. (6)

SECTION - B

3. (a) Discuss the MAC layer functions of IEEE 802.11. (6)
(b) Explain HDLC protocol in detail. (6)
4. (a) Define CRC. Explain CRC generator & CRC checks in detail with one example. (3)
(b) Define FDDI & its needs in detail. (6)

- (c) Write a brief note on virtual LANS. (3)

SECTION - C

5. (a) What is meant by IP addressing? Discuss in detail the various aspects of IPv6 and IPv4. (6)
- (b) Write a note on transition from IPv4 to IPv6. (6)
6. (a) What are various types of messages supported by ICMP? (6)
- (b) Describe the IPv4 header in detail along with the neat diagram. (6)

SECTION - D

7. (a) Why is a three way handshake done in TCP and not UDP protocol? (3)
- (b) Explain Domain hierarchy. (3)
- (c) Explain SMTP, HTTP, SNMP. (6)
8. (a) Give the architectural overview of World Wide Web. (4)
- (b) Explain the role of a DNS on a computer network. (4)
- (c) Explain client server protocols. (4)

SECTION - E (Compulsory)

9. (i) What is the difference between network service and transport service?
- (ii) Define Bit stuffing.
- (iii) How does a DNS Resolver bootstrap the domain name lookup process?
- (iv) Define SMTP.
- (v) Define Piggybacking.
- (vi) Draw the process of error detection in block coding? (2×6=12)