


Course Code : 2101CS501

Date : 05-05-2025

Course Name : Computer Network

Duration : 150 Minutes

Total Marks : 70

Instructions:

1. Attempt all the questions.
2. Figures to the right indicates maximum marks.
3. Make suitable assumptions wherever necessary.

Q.1 (A) Define Computer Network with example & List application used in real life. **4**
(B) Compare LAN, MAN & WAN. **3**
OR

Explain star topology with example.

(C) Draw OSI Layer with each layer functionality. **7**
OR

Compare OSI layer and TCP/IP model.

Q.2 (A) What is importance of application layer in computer network? Justify. **4**
(B) State the port of below: of below: 1) DNS, 2) SMTP, 3) HTTPS. **3**
OR

Write a short note on FTP.

(C) Discuss how email works using SMTP protocol. **7**
OR

Explain persistent HTTP with suitable example.

Q.3 (A) Explain checksum with any example. **4**
(B) Draw UDP header. **3**
OR

Draw TCP header.

(C) Explain rdt 2.1 with diagram. **7**
OR

Explain rdt 3.0 with diagram.

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|------------|------------|---|----------|
| Q.4 | (A) | Define subnetting and find total subnet of IP address 192.168.0.1/26. | 4 |
| | (B) | Find the total number of host IP address 192.168.0.1/26. | 3 |

OR

Compare datagram network and virtual circuit network.

- (c)** Draw IPv4 datagram format. **7**

OR

Draw IPv6 datagram format.

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|------------|------------|--|----------|
| Q.5 | (A) | Explain parity check technique with any example. | 4 |
| | (B) | Write a short note on FDMA. | 3 |

OR

Write a short note on CDMA.

- (c)** Explain CRC technique with any example. **7**

OR

Describe how ARP works with suitable example.
