

COMPUTER NETWORKS
(CSEN 3201)

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and any 5 (five) from Group B to E, taking at least one from each group.

Candidates are required to give answer in their own words as far as practicable.

Group - A
(Multiple Choice Type Questions)

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) Direction of data flow
(a) simplex (b) full duplex (c) half duplex (d) All the above.
- (ii) Multiplexing is a technique that allows
(a) different analog and digital transmission streams to be handled at the same time across a shared link.
(b) different analog and digital transmission streams to be handled at the same time without a shared link.
(c) both (a) & (b)
(d) none of the Above.
- (iii) Framing is a
(a) connection between two computers or devices ,even if wireless where data is transmitted as a stream of bits.
(b) point-to-point connection between two computers or devices consisting of a wire where data is transmitted as a stream of bits
(c) both (a) & (b)
(d) none of these.
- (iv) Stop-and-Wait / Go-Back-N / Selective Repeat are
(a) Physical Layer Protocols (b) Congestion Control Protocols
(c) Flow Control Protocols (d) None of the above.
- (v) IPV4
(a) is 32 Bit IP Address, It supports VLSM (Virtual Length Subnet Mask)
(b) is 64 Bit IP Address, It supports VLSM (Virtual Length Subnet Mask)
(c) is 32 Bit IP Address, It does not supports VLSM (Virtual Length Subnet Mask)
(d) none of the above.
- (vi) Link-state protocol that is used within a single Autonomous System
(a) IP (b) BGP (c) OSPF (d) Stop and Wait.

Group - D

6. (a) What is Address Depletion problem in Class full addressing scheme? Explain CIDR notation in Class less Addressing Scheme.
(b) Draw IPV4 packet format. Explain the important parameters of IPV4.
(5 + 2) + 5 = 12
7. (a) A supernet has first address of 205.16.32.0 and a supernet mask of 255.255.248.0. How many blocks are in this supernet and what is the range of addresses?
(b) How the Routing Table Updating takes place in case of Link State Routing Algorithm Used?
6 + 6 = 12

Group - E

8. (a) Explain with the help of a Diagram the three different phases in TCP handshaking. How does 3 way handshaking improvises the network performance with respect to TCP?
(b) Explain any of the techniques to improve the QoS.
(5 + 2) + 5 = 12
9. (a) Difference between TCP and UDP.
(b) Write a note on
(i) Application Layer Protocols. OR
(ii) Window management.
5 + 7 = 12

