

TYIT (Sem VI) / Internet Technology / 125

Q.P. Code: 36134

(2½ hours)

Total Marks: 75

- N. B.: (1) All questions are compulsory.
(2) Make suitable assumptions wherever necessary and state the assumptions made.
(3) Answers to the same question must be written together.
(4) Numbers to the right indicate marks.
(5) Draw neat labeled diagrams wherever necessary.
(6) Use of Non-programmable calculators is allowed.

1. **Attempt any two of the following:** 10
 - a. What are the responsibilities of Transport layer in OSI Model?
 - b. Explain Subnetting giving example.
 - c. Explain fields related to Fragmentation in detail.
 - d. Write a note on Global Unicast Address that covers following:
Definition, Three levels of hierarchy.

2. **Attempt any two of the following:** 10
 - a. Draw and explain ATMARP Packet.
 - b. Explain Timestamp Request and Reply of ICMP.
 - c. Explain Data Transfer Phase of Mobile communication.
 - d. Explain two node instability problem in Distance vector routing and its solution.

3. **Attempt any two of the following:** 10
 - a. Explain Features of UDP in detail.
 - b. Write and Explain algorithm of input module of UDP.
 - c. Draw and explain TCP Segment Format.
 - d. Explain Timers in TCP.

4. **Attempt any two of the following:** 10
 - a. Explain Association establishment in SCTP.
 - b. Explain Data Chunk of SCTP with its packet format.
 - c. Draw and explain DHCP client state transition diagram.
 - d. Explain Recursive and Iterative Resolution in DNS.

5. **Attempt any two of the following:** 10
 - a. Explain NVT character set for option negotiation.
 - b. Explain Components of SSH.
 - c. Explain two FTP connections, control and data with diagram.
 - d. Explain DATA and ACK message of TFTP.

6. **Attempt any two of the following:** 10
 - a. What is the role of Message Access Agent in email communication? Explain POP and IMAP.
 - b. Explain Web Based E-Mail.
 - c. Draw and explain RTP packet format.
 - d. How do you download a compressed audio/video using a web server and using a media server?

7. Attempt any three of the following:
- a. Write points of comparison between IPv4 and IPv6.
 - b. Explain types of links available in OSPF.
 - c. Explain Congestion policy of TCP.
 - d. Explain Generic Domain, Country Domain, and Inverse Domain.
 - e. Explain Persistence and non-persistence connection of HTTP.
 - f. How does Video compression (MPEG) happen?
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