

Duration: 3 Hrs.

Total Marks:80

N.B. : 1. Question No. 1 is Compulsory.

2. Attempt **any three** questions from remaining **five** questions.

3. Figure to the right indicates full marks.

- Q.1 a) What is framing? Explain in short different framing methods. 5
 b) Discuss design issues for various layers. 5
 c) Compare TCP/IP and OSI reference models. 5
 d) Explain various error-reporting messages in Interned Control Message Protocol. 5
- Q.2 a) What is congestion control? Explain various congestion prevention policies. 10
 b) Explain working of simple mail transfer protocol (SMTP). 10
- Q.3 a) Explain in detail IPv4 header format with diagram. 10
 b) Explain CSMA protocols. How are collisions handled in CSMA/CD? 10
- Q.4 a) Explain working of link state routing algorithm. Explain content and requirements of link state packets. 10
 b) Explain congestion control approaches in TCP. 10
- Q.5 a) Explain File Transfer Protocol (FTP). 10
 b) Explain sliding window protocol using Go Back-N technique. 10
- Q. 6 Write short notes on following. 20
 a) Simple Network Management Protocol (SNMP)
 b) Address Resolution Protocol (ARP)
 c) Bluetooth
 d) Berkeley Sockets
