

**Duration: 3 Hours****Total Marks: 80****N.B.**

1. Question number **ONE** is compulsory
2. Attempt any **THREE** questions from question 2 to 6
3. Figures to the right indicate full marks
4. Assume suitable data if necessary

- Q1. Answer any **FOUR** from the following **(20)**
- (a) What are the different types of the classes of IP address?
  - (b) Compare TCP/IP vs OSI Model
  - (c) Explain the use of SSH
  - (d) Explain traditional Ethernet with neat diagram
  - (e) What parameters can be used to assess the performance of the network?
- Q2. (a) Explain the functions of each layer of the OSI reference model **(10)**  
 (b) Explain subnetting with example **(10)**
- Q3. (a) Discuss congestion and flow control in the network **(10)**  
 (b) Explain sliding window protocol with neat diagram **(10)**
- Q4. (a) Explain working of the DNS server with neat diagram **(10)**  
 (b) Explain TCP connection establishment and termination using three-way handshaking **(10)**
- Q5. (a) Explain the working of the CSMA/CD with neat diagram and flow chart **(10)**  
 (b) Explain IPv4 header format **(10)**
- Q6. Write short note on the following (**Any four**) **(20)**
- (a) Networking and Internetworking Devices
  - (b) Timers in TCP protocol
  - (c) HDLC
  - (d) Slotted ALOHA
  - (e) Guided and unguided transmission media

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