Duration: 2 Hours   **Marks: 50**

Instructions: 1) All questions are compulsory.
2) Figures to the right indicate marks

Q I) A. Define the following terms: (5*1= 5)
    1. Subnet   2. Framing   3. Flow Control
    4. Piggybacking   5. Routing

    B. Answer the following:
    1. Which are the three types of Data Transfer Techniques?   (3)
    2. State the various responsibilities of Session layer.   (2)

QII) Answer the following:
    1. Explain in brief Bus Topology.   (2)
    2. Write a note on Fibre Optic Cable also state its advantages.   (4)
    3. Write a short note on the following: (4)
        i. WAN   ii. Infrared Waves

QIII) Answer the following:
    1. Explain the working of Sliding Window Protocol.   (5)
    2. Briefly explain the HDLC Protocol.   (3)
    3. What is IEEE 802.11 wireless LAN standard?   (2)

QIV) Answer the following:
    1. Illustrate with an example Shortest Path Routing Algorithm.   (5)
    2. Explain in detail IPv4 header frame format.   (5)

QV) Answer the following:
    1. Write a short note on Cryptography.   (3)
    2. Differentiate between TCP and UDP.   (2)
    3. With a neat diagram explain the working of FTP.   (5)

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