

(Time: 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) Figures to the **right** indicate **marks**.
 (5) Draw **neat labeled diagrams** wherever **necessary**.
 (6) Each question carries **5 marks**.

1. Attempt any three of the following:

15

- What is meant by a handshaking protocol?
- Explain HTTP Message format.
- Explain difference between TCP & UDP.
- Explain & list the UDP Applications.
- What are types of Routing Protocols? Explain in detail.
- Explain IPv4 Datagram format.

2. Attempt any three of the following:

15

- Explain what is Control-Plane Virtualization?
- Explain Distance Vector Routing (DVR) Protocol.
- Explain what is Data-Path Virtualization?
- Why there is a need for Virtualization?
- Distinguish between Distance Vector Routing and Link State Routing.
- Explain in detail Enhanced Interior Gateway Routing Protocol (EIGRP).

3. Attempt any three of the following:

15

- What are the 4 basic types of routing in ad-hoc network? Explain.
- Explain in detail the applications of Mobile Ad-hoc Network (MANET).
- What are advantages and disadvantages of WLANs?
- What is Bluetooth? Explain its architecture.
- Explain in detail about HiperLAN.
- Explain Home RF technology in detail.

4. Attempt any three of the following:

15

- What is WSN? What are the applications of WSN?
- Explain advantages and disadvantages of radio transmission.
- State and explain the design consideration in Sensor Networks?
- How are localization schemes classified? Explain.
- How are routing protocols in WSN classified? Explain.
- How is clustering done in WSN? How is the Cluster Head selected?

5. Attempt any three of the following:

15

- Write a short note on Virtual Circuit and Datagram Networks.
- What is the difference between Multiplexing and Demultiplexing?
- What are topology based routing protocols? Explain in detail.
- Explain Path Vector Routing.
- Explain the difference between circuit switching and packet switching?
- Explain RFID as a passive sensor.
