

[Time:2.30 Hrs]

[Marks:75]

Please check whether you have got the right question paper.

- N.B:
1. All question are compulsory.
 2. Figures to the right indicate full marks.
 3. Students answering in the regional language should refer in case of doubt to the main text of the paper in English.

- Q.1 Attempt **any three** of the following: 15
- a. Describe the block structure of the Communication System.
 - b. Discuss the duties of Physical Layer & Network Layer.
 - c. Write in brief about attenuation, Distortion & Noise.
 - d. What is a network? Explain LAN in detail.
 - e. Define the following terms:
 1. Time period
 2. Frequency
 3. Wavelength
 4. Bandwidth
 5. Bit rate.
 - f. Explain Pulse Amplitude Modulation (PAM) Technique in detail.
- Q.2 Attempt **any three** of the following: 15
- a. Write a short note on Fiber Optic Cable.
 - b. Explain in detail CRC method of error detection and correction.
 - c. Describe Microwave Communication in detail.
 - d. Write a short note on Time-Division Multiplexing (TDM).
 - e. Explain Frequency Spread Spectrum in brief.
 - f. What is Switching? Explain Packet – Switching in detail.
- Q.3 Attempt **any three** of the following: 15
- a. Describe the working of Go-Back-N protocol.
 - b. What is Cellular telephony? Explain Frequency Reuse Principle.
 - c. Explain Carrier Sense Multiple Access (CSMA).
 - d. Describe the architecture of Bluetooth.
 - e. Explain Point-to-Point Protocol in detail.
 - f. What are Hubs and routers? State difference.
- Q.4 Attempt **any three** of the following: 15
- a. State & explain various services provided by Network Layer.
 - b. What are IPv6 addresses. Explain address space & representation.
 - c. Write a short note on ICMPv4.
 - d. Sketch & explain IPv4 Datagram Header format.
 - e. Explain OSPF in detail.
 - f. State the advantages of IPv6 when compared to IPv4.
- Q.5 Attempt **any three** of the following: 15
- a. Write a short note on HTTP.
 - b. Differentiate between connection Oriented & Connection less service.
 - c. What is Electronic Mail? Explain with its architecture.

- d. Write a brief note on Domain Name System (DNS).
- e. Differentiate between UDP & TCP.
- f. Explain the Header format of User Datagram Protocol (UDP).