

Instructions: All questions in Section I carry equal marks.
 Attempt any **TWO** questions in Section I.
 Question V in Section II is **COMPULSORY**.

Section I

- Que:1(A) What is data communication? Explain simplex, half-duplex, full-duplex transmission. (10)
 (B) List different modulation techniques. Explain any two in detail. (10)
- Que:2 (A) What is transmission error? Explain any two error recovery methods. (10)
 (B) What is multiplexing? Explain TDM and WDM in detail. (10)
- Que:3 (A) List various network topologies. Explain any two in detail. (10)
 (B) What is switching? Explain methods of Packet switching (10)
- Que:4 (A) Explain 7-layer OSI model in detail. (10)
 (B) Explain ISDN architecture and interface in detail. (10)

Section II

Que: 5 Answer following. (10)

- A set of rules that govern data communications between sender and receiver is called _____.
 a. Rule c. Law
 b. Protocol d. Option
- _____ signals are on-off in nature.
 a. Analog c. Mixed
 b. Digital d. None of these
- Parallel transmission is generally used for _____ distances.
 a. Long c. Short
 b. Very long d. Intercity

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4. In _____, the medium is divided into a number of channels, each with a frequency bandwidth.
 - a. FDM
 - b. TDM
 - c. STDM
 - d. None of these

5. As a signal travels through any medium, its strength decreases due to _____.
 - a. Noise
 - b. Delay distortion
 - c. Attenuation
 - d. Retransmission

6. Out of all the guided media, _____ has the highest data transmission rates.
 - a. UTP
 - b. STP
 - c. Coaxial cable
 - d. Optical fiber

7. Message switching is also called _____ technique.
 - a. Get and hold
 - b. Store and release
 - c. Store and forward
 - d. Store and never release

8. The standard for Bluetooth is called _____.
 - a. IEEE 802.15
 - b. IEEE 802.2
 - c. IEEE 802.11
 - d. IEEE 802.5

9. Types of bridges can be _____.
 - a. Simple
 - b. Learning
 - c. Multiport
 - d. All of these

10. A transceiver connects a _____ to _____.
 - a. Computer, computer
 - b. Computer, Ethernet
 - c. Network, network
 - d. Ethernet, Ethernet
