

16/5/2026

B.E. Sem-IV (INFT) (HEP 2020) May/2020

Duration -2 Hours.

(Total Marks: 60)

N.B.:

- (1) Question No.1 is compulsory.
- (2) Attempt any three questions from the remaining five questions.
- (3) Make suitable assumptions wherever necessary but justify your assumptions.

Q.1 Attempt the any Three questions.

- a) Define Computer Network. State its types.
- b) What is OSI Model? List its layers.
- c) Define MAC address and ARP.
- d) What is UDP? State its features.

(05 M)

(05 M)

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(05 M)

Q.2 a) Explain the OSI reference model with neat diagram.

(07 M)

b) Differentiate between Circuit Switching and Packet Switching.

(08 M)

Q.3 a) Explain error detection techniques: CRC and Checksum with example.

(07 M)

b) What is Flow Control? Explain Stop-and-Wait and Sliding Window protocols.

(08 M)

Q.4 a) Solve a problem on Go-Back-N ARQ protocol.

(07 M)

b) Given an IP address, perform subnetting and find number of hosts.

(08 M)

Q.5 a) Explain Routing Algorithms: Distance Vector and Link State.

(07 M)

b) Differentiate between TCP and UDP with applications.

(08 M)

Q.6 a) Design a network for a college using VLAN and IP addressing.

(07 M)

b) Explain congestion control techniques and their importance in networks.

(08 M)
