Roll No. ☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages: 02

Total No. of Questions: 09

Time: 3 Hrs.   **Max. Marks: 70**

INSTRUCTIONS TO CANDIDATES:
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C have FOUR questions each, carrying TEN marks each.**
3. **Attempt any FIVE questions from SECTION B & C, selecting atleast TWO questions from each of these SECTIONS B & C.**

SECTION-A

1. **Write briefly :**

    a) What is the difference between a BSS and an ESS?

    b) List any four security protocols used in computer networks.

    c) What is the basic concept of SNMP protocol?

    d) How Reservation mechanism helps in controlled channel access?

    e) What is the difference between static and dynamic routing?

    f) What are the advantages of dividing an Ethernet LAN with a bridge?

    g) What do you mean by peer-to-peer application?

    h) Which fields of the IPv4 header change from router to router?

    i) List the applications that use UDP protocol at transport layer.

    j) Convert the Ethernet address 1A:2B:3C:AD:5E:6F in binary form.

SECTION-B

2. What is the difference between switch and router? Illustrate with an example.

3. Discuss Persistent and Non-persistent CSMA in detail? How collision detection is done in CSMA/CD?

4. Explain any client-server architecture-based business application and list various concepts of computer networks used in that application.

5. Discuss TCP/IP layered model along with functionality of each layer in detail. Compare it with OSI model.

SECTION-C

6. Describe various congestion control strategies in detail.

7. Compare the data rates for Standard Ethernet, Fast Ethernet, Gigabit Ethernet, and Ten-Gigabit Ethernet. Also, discuss the MAC sublayer of Fast Ethernet in detail.

8. What is the difference between connectionless and connection-oriented services? Which type of service is provided by IPv4 and IPv6?

9. Write short note on:

   a) SMTP

   b) HIPPI

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.