M.Sc.(IT) (2016 to 2018)   (Sem.–2)
DATA COMMUNICATION AND NETWORKS
Subject Code : MSIT-201
M.Code : 72728

Time : 3 Hrs.   **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students have to attempt any ONE question from each SECTION.**
2. **SECTION-E is COMPULSORY consisting of TEN questions carrying TWENTY marks in all.**

SECTION-A

1. How is the OSI reference model different from the TCP/IP model? Also write the similarities between the two.

2. Which technique used for efficient utilization of available bandwidth? Also write its different types.

SECTION-B

3. Describe the IEEE 802.3 standard in detail. Write the frame formats and implementation details.

4. What are the services provided by Data Link Layer to its upper layers? Explain briefly.

SECTION-C

5. What is the role of Internet Protocol in the network layer? Describe the details of the protocol.

6. Write a note on the various Routing algorithms available in the network layer.

SECTION-D

7. Describe in detail the difference between UDP and TCP.

8. What is World Wide Web? How does Domain Name System (DNS) help in accessing the www?

9. **Write short notes on the following:**

   a) HTTPS

   b) Various Transmission Impairments

   c) Use of Netstat command

   d) Working of Wireless Networks

   e) Relationship between Layers, Protocols and Interfaces

   f) Working of FTP

   g) Usage of ARP

   h) Difference between Radiowaves and Microwaves

   i) Role of Port number in TCP

   j) Best Error Prevention Technique

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