

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

M.Sc (Computer Science) (2019 & Onwards) (Sem.-2)

DATA COMMUNICATION & NETWORKS

Subject Code : MSC-204

M.Code : 71448

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTIONS-A, B, C & D contains TWO questions each carrying TEN marks each and students has 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. Distinguish Between
 - a. OSI Reference Model and TCP/IP model.
 - b. LAN, MAN and WAN
2.
 - a. Illustrate different transmission impairments occurred while there is physical data transfer between source and destination.
 - b. Explain the different types of guided media for data transfer.

SECTION-B

3.
 - a. Explain different services offered by data link layer.
 - b. What is Carrier Sense Multiple Access (CSMA)? How it is different from CSMA/CD?
4.
 - a. Compare and Contrast Ethernet, Token Bus and Token Ring.
 - b. Explain sliding window flow control protocol used at data link layer.

SECTION-C

5.
 - a. What is routing? Explain the distance vector routing protocol.

- b. Explain the difference between interior and exterior routing protocols with the help of suitable examples.
- 6. a. Explain leaky bucket congestion control algorithm.
- b. Discuss the header structure of IPV4.

SECTION-D

- 7. a. How connection establishment is achieved using 3 way handshake mode at transport layer. Give example.
- b. TCP Vs. UDP Transport layer protocol
- 8. a. What is Domain Name System? How DNS works?
- b. Discuss the purpose of Telnet and FTP protocols at application layer.

SECTION-E

- 9. **Write briefly :**
 - a. Define Protocol.
 - b. What is piggybacking?
 - c. What is difference between IP address and MAC address?
 - d. Define Checksum.
 - e. Why do we use ARP protocol?
 - f. What is the purpose of tracert command?
 - g. Difference between connection oriented and connectionless service.
 - h. Difference between HTTP and HTTPS.
 - i. What is port address?
 - j. Which protocol is used for Email at application layer?

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.