Total No. of Questions : 8]   *[Total No. of Printed Pages : 2*

Roll No ....

MCA-305
M.C.A. III Semester
Examination, June 2020
Computer Networks

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions out of eight questions.

     ii) All questions carry equal marks.

     iii) Assume suitable data, if required

1. a) Give a brief introduction on computer networks. Explain some of the differences between the connections less and connection oriented network.

   b) Draw and explain the layered structure of TCP/IP and OSI model. Explain with the help of suitable applications.

2. a) Explain the parity checking code and cyclic redundancy check with the help of suitable example.

   b) Discuss the basic principle of coding Techniques. Also discuss about protocol concepts of coding theory.

3. a) An alternative to a LAN is simply a big time sharing system with terminal for all users. Give two advantages of client server system using a LAN.

   b) Write and explain various IEEE standards for LAN. Discuss that IEEE standard which explain the MAC schemes.

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4. a) Give a brief classification of various topologies which can be use in the local area network. Explain each one of them.

 b) What are the significances of different algorithms used in communication network? Explain the Dijkstra's algorithm showing network properties with communication systems.

5. a) Discuss about the deadlock condition in communication network and its avoidance procedure.

 b) Discuss about the ARQ techniques for error control and their comparison. Discuss about their performance analysis.

6. a) Write down some of the basic differences between the 802.3 and 802.5 IEEE standards.

 b) Define Bridges, Switches. Routers and Gateways. Discuss the applications of these appliances in any of the networking approach.

7. a) Discuss the importance of network security in our day today life. How we can achieve and maintain network security.

 b) Explain the Overview of DNS. Also explain its utility in multimedia communications.

8. Write short notes (any four):
 a) ISDN
 b) CSMA/CD
 c) STDM
 d) UDP
 e) SNMP
 f) DPCM

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