

Total Pages : 03

Roll No. :

MCA-19

Data Communication and Computer Network

5th Semester Examination June 2022

Time : 2 Hours

Max. Marks : 80

Note : This Paper is of Eighty (80) marks divided into two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given there in.

Section-A

(Long Answer-type questions)

Note: Section 'A' contains Five (05) Long-answer type questions of Twenty (20) marks each. Learners are required to answer any two (02) questions only.

(2 x 20 = 40)

P.T.O.

- Q.1. What are the functions of repeaters, bridges, routers and gateways in achieving internetworking? Also, Identify the layers in OSI model in which they operate.
- Q.2 What is OSI model? Explain in detail the differences between OSI model and TCP/IP model.
- Q.3 Explain transmission media. In twisted pair cable why wires are twisted? Briefly explain two categories of twisted pair cables, with their advantages.
- Q.4 Compare and contrast in detail between "Peer to Peer" and "Client server" networking.
- Q.5 Write any two differences between each of the following :
- a. Hubs and Switches
 - b. MAC layer and LLC
 - c. Star and Mesh Topology
 - d. Microwave and Infrared Transmission
 - e. STDM and TDM

P.T.O.

Section-B

(Short Answer-type questions)

Note: Section 'B' contains Eight (08) Short-answer type questions of ten (10) marks each. Learners are required to answer any four (04) questions.

(4 x 10 = 40)

- Q.1 Define Data rate and Signal rate. Write the expression to establish relation between them.
- Q..2 Differentiate between Star and Tree Topology.
- Q.3 What is framing in data link layer? Explain the different methods of framing in data link layer.
- Q.4 Describe Asynchronous Communication and write its advantages and disadvantages.
- Q.5 What are the different classes of IP address? Explain through examples.
- Q.6 Justify the statement "efficiency of slotted ALOHA is double that of pure ALOHA".
- Q.7 Why TCP is called reliable protocol and UDP an unreliable protocol ?
- Q.8 What is FTP? Explain the role and importance of FTP in Data communication.

.....