

C1028

Total Pages : 3

Roll No.

MCS-506

Introduction to Computer Networks

(MSC1T-21/MCA-20)

4th Semester / 2nd Semester Examination, 2022 (June)

Time : 2 Hours]

Max. Marks : 80

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

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.

(2×20=40)

1. What is OSI model? Describe the different layers of OSI model in detail. Draw the diagram also.

2. What is fragmentation? Why do we need ID? Discuss pros and the cons of transparent and non-transparent fragmentation?
3. Difference between symmetric and asymmetric cryptography. Explain the RSA mechanism with diagram. Write the algorithm for it and test the algorithm for some input.
4. What is the importance of routing algorithm? Explain Shortest path routing, flow-based routing and Broadcast routing?
5. What do you mean by Network Topology? Explain the Star, Mesh, and Hybrid Topology.

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 only. (4×10=40)

1. Why is TCP called a connection-oriented, reliable protocol. Explain.
2. What is the difference between Local Area Network and Wide Area Network? Explain.

3. What is route discovery protocol? Give some example of route discovery protocol.
 4. What are the major feature of IP address? Explain IP address structure.
 5. Explain the RSA mechanism with diagram. Write the algorithm for it and test run the algorithm for some input.
 6. Compare pure ALOHA with slotted ALOHA. Which one is better in terms of channel utilization?
 7. What is FDDI network? What are the advantages of FDDI over an Ethernet?
 8. What is CSMA with Collision Detection? Explain collision free protocols?
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