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B. Tech. 5th Semester (CSE) Examination – December, 2022

COMPUTER NETWORKS

Paper : PCC-CSE-303-G

Time : Three hours]   *[Maximum Marks : 75*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions. Question No. 1 is **compulsory**. Selecting *one* question from each Section.

1. Define the following :   2.5 × 6 = 15

   (a) Token Ring

   (b) ARP

   (c) Types of topologies

   (d) Firewall

       P. T. O.

(e) ATM

(f) Router

SECTION – A

2. (a) Explain different types of topologies with their advantages and disadvantages. 8

(b) Differentiate between connectionless and connection-oriented services. 7

3. Discuss the OSI model with suitable diagram. 15

SECTION – B

4. Explain IPv6 with diagram and discuss the role of routers and hub in a network. 15

5. Discuss the Medium Access control layer functions in detail. 15

SECTION – C

6. Explain routing and congestion control in detail. 15

7. Explain different Application Layer protocols of TCP/IP. 15

SECTION – D

8. Explain the SONET/SDH. Also explain the SONET architecture. 15

9. (a) Explain the cryptography technique for network security. 8

   (b) Discuss the concept of Quality of Service provided for a network. 7