M.E. Second Semester (Electronics & Tele.) (Full Time) (C.G.S.- New)

13376 : Advanced Computer Networks and Programming : 2 ENTC 3

P. Pages : 2 | AU - 3467

Time : Three Hours | Max. Marks : 80

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Notes : 1. Answer **three** question from Section A and **three** question from Section B.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Illustrate your answer necessary with the help of neat sketches.

1. Explain the OSI network architecture. Explain the function and features of each of the layers. **14**

OR

2. a) Explain with an example the point to point protocol. **7**

b) Explain circuit switched and packet switched network in detail. **7**

3. a) Explain in detail the Address Resolution protocol with its operation. **7**

b) Give the datagram header format of IPv4 and explain each field. **6**

OR

4. a) Explain two protocols to represent transport layer in TCP/IP. **7**

b) Draw and explain IP datagram format. **6**

5. a) What is traffic shaping? Explain the Leaky bucket techniques for traffic shaping. **7**

b) Explain in detail the M/M/1 queuing model. **6**

OR

6. a) Derive the expression for total delay experienced by the packet in transversing the entire network. **7**

b) Discuss in detail the role of network management in congestion control. **6**

SECTION – B

7. a) Explain the ATM service categories. **7**

b) Discuss in brief the issue involved in using ATM technology in LAN. Also explain the client-server model to handle this issue. **7**

OR

8. a) Discuss the advantages and disadvantages of ATM technology. Also explain its operational principle. 7

   b) Explain B-ISDN in detail. 7

9. a) Discuss the various steps of forwarding components of MPLs from source of destination. 7

   b) What do you understand by integrated services. 6

OR

10. a) What is the purpose of differentiate services? Hence explain the need of traffic conditioner for such services. 7

    b) Explain the MPLs header format. 6

11. a) Explain why substitution ciphers are superior over the transposition ciphers. 7

    b) Discuss the RSA algorithm. 6

OR

12. a) Explain private and public key cryptography in detail with suitable examples. 7

    b) Explain role of digital water-marking in network security. 6

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