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224

B.E V Semester Examination

BE-V/12(A)

233914

COMP. ENGG

Course No. COM 505

(Computer Networks)

Time Allowed- 3Hours

Maximum Marks-100

Note: Five questions have to be attempted at least two questions from each section.

SECTION - A

1. a) Why layered approach is followed in the OSI Reference Model? Explain the important design issues of bottom four layers of OSI Reference Model. (15)
- b) Differentiate between (05)
 - i) Serial communication and parallel communication
 - ii) Point to point Networks and Broadcast Networks
2. a) Define topology and explain the advantages and disadvantages of Bus, star and ring topology. (10)
- b) Compare and contrast Pure ALOHA and slotted ALOHA show mathematically efficiency of both in relational performance. (10)

3. a) Discuss IEEE 802.3 LAN Standards. (07)
- b) Explain different types of ARQs. (07)
- c) What do you understand by Redundancy check?
Calculate CRC for a 10-bit sequence 1010011110. The
generator polynomial is x^3+x+1 (06)
4. a) Write note on ATM networks (07)
- b) Discuss following Transmission Media in detail
- i) Coaxial Cable
- ii) Twisted pair (07)
- c) Flow control can be handled in Transport Layer as well
as Data link layer. Is this a duplication of effort? Please
comment in brief. (06)

SECTION - B

5. a) What is meant by Routing? Explain giving at least three
routing algorithms. (15)
- b) Compare datagram network and virtual network (05)
6. a) What is Congestion? Discuss various techniques for
congestion control. (10)
- b) Write short note on Firewalls (06)

- c) What do you understand by packet switching and circuit switching? (04)
7. a) What is cryptography? Explain different methods of encrypting a message. Also explain DES (15)
- b) Discuss various QOS parameters for transport layer (05)
8. a) What are the various security threats? (07)
- b) Discuss the concept of Internetworking. (07)
- c) What is connection oriented communication and connectionless communication? (06)

