

TCS-502

1009

Odd Semester Examination 2018-19

B.TECH (CSE) (SEMESTER-V)

COMPUTER NETWORK

Time: 03:00 Hours

Max Marks :100

1. Attempt any four : [5×4=20]
- (a) What is the computer Network? What is the Network structure and architecture?
 - (b) What is the OSI reference model? Write about various classes of IP addresses?
 - (c) What are the advantages and disadvantage of transport layer?
 - (d) Differentiate between OSI and TCP /IP reference models.
 - (e) Describe the working principle of Carrier sense multiple access with collision Detection (CSMA/CD).
2. Attempt any four : [5×4=20]
- (a) Explain the Local Access Network Design in details. What are the name the four basic network topologies and cite an advantage of each type.
 - (b) Differentiate between Flow control and Error control. What is the difference between a port address, a logical address and a physical address?
 - (c) Discuss different standards of Ethernet.
 - (d) Write difference between static and dynamic routing and Explain dijkstra routing algorithm.
 - (e) Differentiate between Circuit Switching, Packet Switching and Message switching.

3. Attempt any two : [10×2=20]

- (a) A low transmission tower used to transmit data using 3 KHz bandwidth over the link along with 1 Watt of noise power. Calculate the rate of transmission.
- (b) Explain the different type of header supported by IPv6. What is the difference between IPv4 and IPv6.
- (c) Explain the functions of session, presentation and application layer in OSI reference model.

4. Attempt any two : [10×2=20]

- (a) An aloha network user 21.2 kbps channel for sending message packet of 100 bit long size. Calculate the maximum throughput for pure ALOHA network.
- (b) Explain TCP/IP architecture with a layer diagram. Explain the function and protocol and services of each layer
- (c) What do you mean by transmission impairment? Explain the causes of transmission impairment?

5. Attempt any two : [10×2=20]

- (a) What do you understand by Sliding Window protocol and Data Link Protocols? What is point-to-point protocol? With a neat schematic explain the frame structure of PPP protocol.
- (b) What is IP Addressing? How it is classified? How is subnet addressing is performed?
- (c) With a neat diagram explain the working of stop-and-wait protocol. What is the need for sequence numbers? What is the reason for its inefficiency and how is it addressed in Go-Back-N ARQ protocol.

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