SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | | **Total number of pages:[2]**

Total number of questions:06

B.Tech. || CSE || 4th Semester

Computer Networks

Subject Code:BTEC-413-A

Paper ID: (for office use)

Time allowed: 3 Hrs **Max Marks: 60**

Important Instructions:

- **All questions are compulsory**
- **Assume any missing data**

PART A (2×10)

Q. 1. Short-Answer Questions: All Cos

(a) Why IP addressing is required?
(b) List the disadvantages of Mesh topology.
(c) What are different components of communication system?
(d) Why slotted Aloha is better than Pure Aloha? Justify your answer.
(e) What are the roles of Port addresses?
(f) What is HTTP?
(g) What are the important roles of network ID and Host ID in IP address?
(h) What are features of Adhoc networks?
(i) List the responsibilities of Data Link Layer.
(j) Why medium access techniques are required?

PART B (8×5)

Q. 2. a. What is data communication? Explain different components of data communication? (4) CO1

b. How would you compare connection oriented and connectionless services? (4)

OR

a. What is protocol? What are their needs in communication? Explain all the components of protocol. (4) CO1

b. How would you compare LAN, MAN and WAN. (4)

Q. 3. What can you say about link to link layers of OSI reference model? Also explain the functions of al layers in OSI Model. (8) CO2

OR

Explain TCP/IP model and also compare it with OSI model. (8)

Q. 4. Why flow control is required? Explain the different methods of flow controls in detail. (8) CO2

OR

a. Explain the packet format for IPV4 also discuss disadvantages of IPv4 (5)

b. How would you compare IPv4 and IPv6? (3) CO2

Q. 5. A Company has purchased a network 140.9.0.0. It has four department and wants to subnet the given networks. Find the Network ID, Host ID, Broadcast ID and number of hosts for each Subnet. (8) CO3

OR

Calculate the No. of host and No. of Subnets for each given Subnet Mask if it belongs to (8) CO3

I. Class A Network
II. Class B Network
III. Class C Network

a. 255.0.0.0
b. 255.128.0.0
c. 255.192.0.0
d. 255.240.0.0

Q. 6. a. What is distance vector routing? Explain all steps considering example of 5 Nodes. (5) CO4

b. What are applications of Adhoc Networks? (3)

OR

Explain: CO4

a. DNS (3)
b. FTP (2)
c. Telnet (3)