SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: ☐☐☐☐☐☐☐☐☐☐☐☐ Total number of pages:||

B.Tech. || CSE ||4th Sem

Computer Networks-I

Subject Code: BTCS-403A/403 (RG\RP)
Paper ID:- M\12
(2011 batch onwards)

Time allowed: 3 Hrs Max.Marks:60

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (10×2marks)

Q. 1. Short-Answer Questions:

(a) What does subnet mask 255.255.255.0 signifies?
(b) Explain Physical address and Logical address how they are used for communication.
(c) Write down the difference between transmission and communication.
(d) Explain Manchester Encoding Technique?
(e) In GB3. if every 5th packet that is being transmitted is lost and if we have to send 10 packets. then how many transmissions are required
(f) What are the limitations of Star Topology?
(g) Explain the difference between Bridge and gateway.
(h) Write down the devices name that works on different layer of TCP/IP Model
(i) Write down. In which switching technique each packet of message follows the same path from sender to receiver
(j) What is the need of protocols?

PART B (5×8marks)

Q. 2. Which type of multiplexing is used when fiber optic cable is used as medium for communication and why? OR CO1

What do you mean by link to link layers of OSI reference model? Explain their functions briefly?

Q. 3. What is Congestion. causes of congestion and algorithm used for controlling congestion? CO3

OR

Define Class-full & Classless Addressing Schemes. Explain how we can create Sub-networks & Super-networks with suitable example

Q. 4. Suppose we want to send message 11010111 using the CRC with the polynomial $x^3 + x^2 + 1$ as our generator. To check whether the given string of message received correctly or not. OR CO2

Error correction method used in data link layer with an example also explains how receiver checks errors.

Q. 5. Write a Short Note on : (i) DNS (ii) WWW (iii) HTTP & HTTPS

OR CO5

What is FTP? Explain its Working How it helps in File Transferring

Q. 6. Write down difference between TCP & UDP Protocols CO4

OR

What is Routing Protocol How it helps in transferring Data. Explain RIP Protocol in Detail?