



Semester End Examination - January 2022

Course Code : CSE 307 Course Name : Computer Networks

School of Engineering & Information Technology

Programme : B.Tech (CSE)(Regular & Lateral)

Semester: V

Time :3 Hrs

Max. Marks:100

Part – A (10 questions X 2 marks = 20 Marks)
(Answer All The Questions)

1. Attempts all parts. All parts carry equal marks. Write answer of each part in short.
a. Consider the following statements: [2]
 - a) Packet Processing delay is same at every router.
 - b) Bridge work in data link layer and network layer.
 - c) Repeaters work at only physical layer.Which of the above statements are not correct? Justify your answer.
- b. What is the minimum and maximum length of the header in the IPv4 packet? [2]
- c. Define Network and its application. [2]
- d. Explain factors which affect network performance. [2]
- e. Define the terms unicasting, Multicasting and Broadcasting. [2]
- f. What are the services provided by network Layer? [2]
- g. What are the types of errors at data link Layer? [2]
- h. What is Flow control? [2]
- i. What is MAC Address? [2]
- j. What is Hop to Hop communication? [2]

PART – B (4 questions X 5 marks = 20 marks)
(Answer ALL The Questions)

2. Explain IPv4 and Ipv6 also differentiate between them. [5]
3. Explain public key cryptography and its properties. [5]
4. Suppose that the TCP congestion window is set to 18KB and timeout occurs. How big will the window be if the next four transmission bursts are all successful? Assume that the maximum segment size is 1KB. [5]
5. An address in a block is given as 73.22.17.25. [5]
 - a) Find the total number of address in block.
 - b) First and Last address.

PART – C (3 questions X 10 marks = 30 marks)
(Answer Any Three out of Four Questions)

6. What do you understand by routing? Explain the classification of routing Algorithms. [10]
7. Explain the following: [10]
 - a) LAN b) MAN c) WAN
8. Write Short notes on: [10]
 - a) FTP b) Electronic mail c) World Wide Web
9. Draw the format of TCP header and explain all the fields briefly. [10]

PART – D (2 questions X 15 marks = 30 marks)
(Answer Any Two out of Three Questions)

10. Discuss the reason of congestion in a network. Also discuss leaky bucket and Token Bucket algorithms in details. [15]
11. Explain various kinds of Framing done at data link layer. [15]
12. Define working principle of Fiber optic cable. Explain Step Index mode and Graded Index mode fibers. [15]

