School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - R1UC401T - Computer Networks

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	What is the role of routing algorithms. How Distance vector routing works.	K1(2)
2)	A group of N stations share 1000Kbps sloted ALOHA . Each station output a 500 bits frame on an average of 500 ms . Demonstrate the required value on N.	K2(4)
3)	Illustrate the line code for the sequence 010011001 using NRZ,NRZ-L and Bipolar.	K2(6)
4)	In the context of Communication Network; Utilize the following: PAN, LAN, MAN, WAN, Internet, P2P and Multipoint	K3(9)
5)	Discuss any two protocols in detail (1) stop-and-wait ARQ, (2) Go Back N ARQ and (3) Selective repeat ARQ	K3(9)
6)	Suppose in the first scenario the Code Word is 1010101, with the help of Hamming Code justify that whether this is a valid code or not. In the second scenario the Code Word is 1010111001, with the help of Hammimg Code justify that whether this a valid code or not. Also find the data word in second scenario.	K5(10)
7)	Draw the graph of the NRZ-L scheme,Manchester scheme, Differential Manchester scheme, and NRZ-I for a. 01010101 b. 00110011	K4(12)
8)	How you will determine and implement the two approaches of congestion control techniques for an enterprise network	K5(15)
9)	Coompare and evaluate the TCP/IP and OSI-reference model.	K5(15)
10)	Determine the scenario where sliding window protocol using Go back n is applicable. Explain its working with proper diagrammatic representation	K6(18)