

Reg. No.:

Name :



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Continuous Assessment Test I – September 2023

Programme	: B.Tech. (CSE)	Semester	: Fall 2023-24
Course	: Computer Networks	Code	: BCSE308L
		Slot	: C1+TC1
Faculty	: Dr. Deepa Nivetika, Dr. Neelanarayanan V, Dr. Rajesh Kumar	Class Nbr	: CH2023240100901 CH2023240100902 CH2023240101180
Time	: 90 Minutes	Max. Marks	: 50

Answer ALL the questions

Q.No.	Sub. Sec.	Questions	Marks
1.	a.	In what way is the star topology more expensive than a bus or ring topology? [2 Marks]	
	b.	If there are n devices (nodes) in a network, what is the number of cable links required for a fully connected mesh and star topology respectively? [3 Marks]	10
	c.	Justify the role of standards in networks. Compare and contrast OSI and TCP/IP. [5 Marks]	
2.		For each of the following operations on a remote file server, discuss whether they are more likely to be delay sensitive or bandwidth sensitive. a) Open a file b) Read the content of a file c) List the content of the directory d) Display the attributes of a file e) Download the file	10
3.		A secret data is sent by Mr. Edward to Mr. Jenna. Name three different switching techniques that can be used to send data. Elaborate the switching techniques with necessary diagrams. Recommend a switching technique for this activity.	10
4.		A Satellite TV channel has a bandwidth of 1MHz. With necessary formula, calculate the appropriate bit rate if, (i) The signal to noise ratio of the channel is 63. (ii) The signal to noise ratio of the channel is 0.	10
5.	a.	Find the CRC polynomial function for string 1000101001000001. [1 Mark]	
	b.	Convert and find the CRC for data 011001 using polynomial function x^7+x^3+1 . [5 Marks]	10
	c.	Compute 16 bit checksum for string "chandrya". ASCII value for "a" in decimal is 97. [4 Marks]	