Vivekananda College of Engineering & Technology, Puttur			
[A Unit of Vivekananda Vidyavardhaka Sangha Puttur ®]			
Affiliated to VTU, Belagavi & Approved by AICTE New Delhi			
CRM08	Rev 1.10	CSE	28/07/2022

CONTINUOUS INTERNAL EVALUATION – 2

Dept: CSE	Sem / Div: 4/A &B	Sub: Data Communication	S Code:18CS46
Date:05/08/2022	Time: 3.00- 4.30 PM	Max Marks:50	Elective: N

Note: Answer any 2 full questions, choosing one full question from each part.

QN		Questions	Marks	RBT	CO's
PART A					
1	a	What is Spread Spectrum? Explain DSSS bandwidth sharing.	10	L2	CO2
	b	With neat diagram, explain virtual circuit networks.	10	L2	CO2
	c	Explain with neat diagram, simple parity check code.	5	L2	CO2
OR					
2	a	What is Spread Spectrum? Explain FHSS with suitable diagram.	10	L2	CO2
	b	Explain how message can be sent from one system to another using datagram approach and calculate the total delay with appropriate diagram	10	L2	CO2

	c	Four 1 Kbps connections are multiplexed together. A unit is 1 bit. Find:
		   a. Duration of 1 bit before multiplexing.
		   b. Transmission rate of link.
		   c. Duration of each time slot.
			5	L2	CO2

PART B					
3	a	What is TDM? Explain in detail.	10	L2	CO2

b	Explain stop and wait protocol with appropriate diagram.	10	L2	CO3
c	Given message = 1011011, k = 7 and generator polynomial $P(X) = X^3 + X^2 + X^0$. Find the codeword and design the checker in the receiver using Cyclic Redundancy Codes (CRC).	5	L3	CO2
	OR			
4 a	Define multiplexing and demultiplexing. With the diagram explain the frequency Division Multiplexing(FDM) technique.	10	L2	CO2
b	Explain the frame format and transition phases of point to point protocol.	10	L2	CO3
c	Find the code word using CRC encoder and demonstrate whether the data word is accepted or discarded. The given data is 1001 and the generator is 1011.	5	L3	CO2

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HOD