CONTINUOUS INTERNAL EVALUATION– 1

Dept:CSE	Sem / Div: 4/A &B	Sub:Data Communication	S Code:18CS46
Date:26/05/2021	Time: 3.00-4.30	Max Marks:50	Elective:N

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

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QN		Questions	Marks	RBT	COs
		PART A			
1	a	What is Data Communication? Explain the fundamental characteristics and components of a data communication system .	10	L2	CO1
	b	Explain TCP/IP protocol suite of computer networks with a neat diagram	10	L2	CO1
	c	Consider a noiseless channel with a bandwidth of 3000 Hz transmitting a signal with two signal levels. What is the maximum bit rate?	5	L3	CO1
		OR			
2	a	Explain the different kinds of network topologies with advantages and disadvantages of each.	10	L2	CO1
	b	Explain digital signal transmissions methods.	10	L2	CO1
	c	A network with bandwidth of 10 Mbps can pass only an average of 12,000 frames per minute with each frame carrying an average of 10,000 bits. What is the throughput of this network?	5	L3	CO1
		PART B			
3	a	Define line coding. List out its characteristics.	10	L3	CO2
	b	Explain different causes for transmission impairments during signal transmission through media	10	L2	CO1
	c	In a digital transmission, the receiver clock is 0.1 % faster than the sender clock. How many extra bits per second does the receiver receive if the data rate is 1 kbps? How many if the data rate is 1 Mbps?	5	L3	CO2
		OR			
4	a	Represent the sequence 1011001011 using polar and biphase schemes.	10	L3	CO2
	b	What is Pulse Code Modulation(PCM)?Explain Sampling in PCM	10	L2	CO2
	c	The power of a signal is 10 mW and the power of the noise is 1 μW; what are the values of SNR and SNR_{dB}?	5	L3	CO1