CONTINUOUS INTERNAL EVALUATION- 2

Dept:EC	Sem / Div:VI	Sub:Digital Communication	S Code:18EC61
Date:24-06-2021	Time: 9:30-11:00 am	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	Explain the correlation receiver with neat diagram and explain the detector and maximum likelihood decoder blocks.	10	L2	CO2
	b	Explain with relavent equations binary phase shift keying.With necessary diagrams explain the generation and reception of BPSK signal.	10	L2	CO3
	c	Define modulation. What are its advantages?	5	L2	CO3
		OR			
2	a	Explain the matched filter receiver. Obtain the expression for the impulse response of the matched filter.	10	L2	CO2
	b	Obtain the expression of probability of symbol error for coherent binary FSK	8	L2	CO3
	c	Describe the QPSK signal with its signal space characterization.	7	L2	CO3
		PART B			
3	a	Derive the expressions for mean and variance of the correlator outputs.Also show that the correlator outputs are statistically independent.	10	L2	CO2
	b	With a neat block diagram explain the generation and detection of QPSK signals.	7	L2	CO3
	c	Obtain the expression of probability of symbol error for coherent binary PSK	8	L2	CO3
		OR			
4	a	Explain the signal space characterization of FSK signal.	7	L2	CO3
	b	Given the input binary sequence 01101000. Sketch the waveforms of the inphase and quadrature components of a modulated wave and next sketch the QPSK signal.	10	L3	CO3
	c	With a neat block diagram explain the generation and coherent detection of FSK signals.	8	L2	CO3

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