Hall Ticket Number :										

R-19

Code: 19BE3AT

M.Tech. III Semester Regular Examinations March 2021

Cost Management of Engineering Projects

(Common to All Branches)

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 12 = 60 Marks)

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		Marks	CO	Blooms Level
	UNIT–I			
1.	Categorize different methods of costing. Explain in brief with examples of industries using a specific method	12M	CO3	L4
	OR			
2.	What is strategic cost management? Discuss its components and stages	12M	CO2	L2
	UNIT–II			
3.	Illustrate different methods of inventory valuation with their merits and demerits	12M	CO1	L3
	OR			
4.	What are the elements of cost? Explain in brief.	12M	CO2	L1
	UNIT–III			
5.	Discuss applications of PERT/CPM in project planning and explain the difference between them.	12M	CO3	L2
	OR			
6.	Describe the role of project contracts and project control techniques.	12M	CO1	L2
	UNIT–IV			
7.	Outline standard costing with its objectives, merits and demerits	12M	CO2	L4
	OR			
8.	What is budgetary control? Discuss essential elements of budgetary control	12M	CO1	L1
	UNIT–V			
9.	Demonstrate transportation problem with some examples	12M	CO3	L3
	OR			
10.	What is the travelling salesman problem? Which situations can be treated as the travelling salesman problem? How does its solution differ from the solution of the assignment problem?	12M	CO2	L4

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Hall Ticket Number :										

R-19

Code: 19B43AT

M.Tech. III Semester Regular Examinations March 2021

Digital Communication techniques

(Embedded Systems)

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 12 = 60 Marks)

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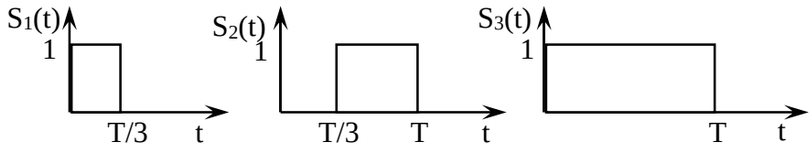
			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Explain briefly the concept of geometric representation of signals?	6M	CO2	1
	b)	Suppose that X is a Gaussian random variable with zero mean and unit variance. Let $Y = aX^2+b$, $a > 0$ Determine and plot the PDF of Y.	6M	CO2	5
		OR			
2.	a)	Discuss and plot the probability density functions of Gaussian, Rayleigh and Rician distributions.	6M	CO2	1
	b)	Using the gram Schmidt orthogonalization procedure, find ortho-normal basis functions for the set of signals and construct the signal space diagram? 	6M	CO2	5
		UNIT–II			
3.	a)	Describe the implementation of an optimum detector for AWGN channel?	6M	CO1	2
	b)	List the memory less modulation methods? Explain briefly the concept of QAM	6M	CO1	2
		OR			
4.	a)	With neat sketch explain Phase tree; phase Trellis and State Diagram for CPFSK?	6M	CO3	1
	b)	A binary communication system uses two equiprobable messages. The channel noise is additive Gaussian with power spectral density No/2. Assume that we have designed an optimal receiver for this channel. Derive an expression for probability of error?	6M	CO2	4
		UNIT–III			
5.	a)	Explain the characteristics of multipath fading channels?	6M	CO3	1
	b)	Describe how tapped delay line channel model overcomes the consequences of fading?	6M	CO1	2
		OR			
6.	a)	With a block diagram explain the generalized RAKE demodulator?	6M	CO1	2
	b)	Write a short note on statistical models for fading channels?	6M	CO2	1
		UNIT–IV			
7.	a)	Describe the suboptimal channel equalization approaches to compensate ISI?	6M	CO3	2
	b)	A binary PAM wave with bit duration of 10 µsec is to be transmitted over a channel with a maximum bandwidth of 75kHz. Determine a suitable raised cosine spectrum for this purpose.	6M	CO2	5
		OR			
8.	a)	Discuss in detailed the Nyquist criterion for designing band-limited signals to avoid ISI?	6M	CO3	2
	b)	The binary data stream 001101101 is applied to the input of duo-binary system. Determine the duo-binary coder output and the receiver output with and without precoder.	6M	CO2	5
		UNIT–V			
9.	a)	What are the advantages of orthogonal frequency division multiplexing (OFDM) for digital transmission over channels subject to fading?	6M	CO4	1
	b)	With a block diagram, Explain the operation of basic OFDM Transmitter?	6M	CO4	2
		OR			
10.		With a block diagram briefly describe the filter bank implementation of OFDM receiver?	12M	CO4	2

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