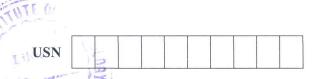
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(10 Marks)

(10 Marks)



Eighth Semester B.E. Degree Examination, Jan./Feb.2021 Energy Auditing and Demand Side Management

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer FIVE full questions, selecting at least TWO questions from each part. 2. Missing data may be suitably assumed.

		PART – A	
1	a.	What is Energy Conservation? With neat block diagram, explain three pronged a	pproach to
	•••	Energy Management.	(07 Marks)
	b.	Explain the broad features of Indian Electricity Rules 1956.	(07 Marks)
	c.	With respect to the supply system summarise the points in the distribution code.	
			(06 Marks)
2	a.	Explain briefly the time value of money concept and pay back analysis.	(04 Marks)
	b.	Define Depreciation and explain straight line depreciation and sinking fund deprec	ciation.
			(08 Marks)
	c.	A father wants to set aside his money for his 5 year old son for future education.	
		be deposited in a bank account that pays 8% per year compounded annually, wh	at deposits
		should be made by the father till his son's 17 th Birthday in order to provide his son	
		on his 18 th , 19 th , 20 th and 21 st birthday? Develop a cash flow diagram.	(08 Marks)
_			
3	a.	With block diagram, explain the energy management strategies.	(06 Marks)
	b.	Give the Ten step methodology for detailed energy audit and explain.	(10 Marks)
	c.	Define Energy Audit and explain its importance.	(04 Marks)
		Wide Control	(0,7,7,7,1,1)
4	a.	With a vector diagram, explain various components of power triangle.	(05 Marks)
	b.	Explain plant energy performance and power flow concept.	(08 Marks)
	c.	Draw the single line diagram for typical AC power supply scheme and explain bri	(07 Marks)
		PART – B	(07 Marks)
5	a.	Define power factor. Mention the causes and disadvantages of low power factor.	(07 Marks)
	b.	What is Tariff? Explain different types of tariff.	(06 Marks)
	c.	A single phase motor connected to 400 V, 50 Hz supply takes 31.7 amps at a pow	6
		0.7 lagging. Calculate the capacitance required parallel with motor to raise the po	
		of 0.9 lagging.	(07 Marks)
	1		
6	a.	What is ABT? Mention the broad features of ABT design.	(10 Marks)
	b.	What is Demand Side Management (DSM)? Why DSM is required?	(06 Marks)
	c.	Mention the Tariff options for DSM.	(04 Marks)
7	a.	With a neat block diagram, explain DSM planning and implementation.	(10 Marks)
	b.	Explain the concept of End Use Energy conservation.	(10 Marks)

Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8=50, will be treated as malpractice.

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Mention different techniques of DSM and explain any four techniques briefly.

Explain energy efficient equipments in electrical system.