Eighth Semester B.E. Degree Examination, Aug./Sept.2020

Energy Auditing and Demand Side Management

Time: 3 hrs.		S hrs. Max. M	arks:100	
Note: Answer any FIVE full questions, selecting at least TWO questions from each part.				
Note, Mishel wily 11, 2 July 4				
		PART - A		
1	a.	Describe the present energy situation in India.	(10 Marks)	
	b.	Describe the different statutory public controls, which regulate the supply industry	y. (10 Marks)	
			(101111111)	
2	a.	Explain pay back analysis. Mention its advantages and disadvantages.	(05 Marks)	
	b.	Write a short note on time value of money concept.	(05 Marks)	
	c.	he equipment in a power station costs Rs.15,60,000 and has a salvage value of Rs.60,000 at		
		he end of 25 years. Determine the depreciation value of the equipment at the end of		
		20 years by the following methods:		
		(i) Straight line method(ii) Diminishing value method		
		(ii) Diminishing value method(iii) Sinking Fund Method at 5% compounded annually	(10 Marks)	
		(III) Shiking I and ividuod at 270 temperature		
3	a.	Explain ten steps methodology for detailed energy auditing.	(10 Marks)	
	b.	What is ABT? What are the broad features of ABT design?	(10 Marks)	
		C. T. i 1 C	ovalain the	
4	a.	Draw the single line diagram for a Typical AC power supply scheme and also	(10 Marks)	
	1.	distribution scheme. Discuss the role of energy management team and key instruments required		
	b.	auditing.	(10 Marks)	
		auditing.		
		$\underline{PART} - \underline{B}$		
5	a.	Define most economical power factor and derive expression for most economical	nical power	
		factor.	(10 Marks)	
	b.	A factory has a maximum load of 240 KW at 0.7 lagging with an annual con-	flat rate of	
50,000 units. The tariff is Rs.50/KVA of MD plus 10 paisa/unit. Calculate the flat rate of energy consumption. What will be annual savings if power factor is raised to unity?				
		energy consumption. What will be aimual savings if power factor is failed to aim	(10 Marks)	
		What is tariff? Enumerate the different types of tariff and explain each in brief.	(10 Marks)	
6	a.	what is taill? Enumerate the different types of taill and explain each in other.		

- (05 Marks) Explain some good practices in lighting.
 - (05 Marks) Write a short note on energy efficient motors.
- Define DSM and explain the concept of DSM. (06 Marks)
 - Discuss the tariff options for DSM. Which tariff promote DSM? (06 Marks)
 - Explain the various steps in DSM planning and implementation. (08 Marks)
- Explain the Energy Conservation Opportunity in:
 - (10 Marks) (ii) Industrial sector (i) Agricultural sector
 - b. Enumerate the Techniques of DSM and explain any two methods with a neat sketch. (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.