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BTECH
(SEM VIII) THEORY EXAMINATION 2021-22
POWER THEFT & ENERGY MANAGEMENT

Time: 3 Hours**Total Marks: 70****Notes:**

- Attempt all Sections and Assume any missing data.
- Appropriate marks are allotted to each question, answer accordingly.

SECTION-A	Attempt All of the following Questions in brief	Marks (7X2=14)
Q1(a)	Discuss energy audit.	
Q1(b)	Discuss lux meter	
Q1(c)	Discuss energy demand.	
Q1(d)	Discuss energy supply.	
Q1(e)	List down different sources of energy.	
Q1(f)	Characterize the process of benchmarking	
Q1(g)	Explain Menace of power theft.	

SECTION-B	Attempt ANY THREE of the following Questions	Marks (3X7=21)
Q2(a)	How to calculate the ratio of current year's production to the reference year's production? Explain.	
Q2(b)	Explain the equilibrium condition in demand and supply of energy also explain its effect.	
Q2(c)	What are the reasons of power pilferage? Discuss some case studies related to power theft in India.	
Q2(d)	What do you mean by electricity loss and harmonics? Explain its national and global scenario.	
Q2(e)	Describe the method of power theft by partial earth fault tampering with neat diagram	

SECTION-C	Attempt ANY ONE following Question	Marks (1X7=7)
Q3(a)	What is the function of current transformer in electronic energy meter? Discuss different methods of power theft by meddling current transformer.	
Q3(b)	Describe in detail an energy efficient programme as a part of strategy to manage electricity.	

SECTION-C	Attempt ANY ONE following Question	Marks (1X7=7)
Q4(a)	What is peak load? Explain controlling method for peak load.	
Q4(b)	How to calculate the energy consumption.? Describe the Various charges and their slabs.	

SECTION-C	Attempt ANY ONE following Question	Marks (1X7=7)
Q5(a)	Describe security seals and their tampering in energy meters. Explain the effects of harmonics on electricity loss and theft.	
Q5(b)	Explain partial earth fault tempering and missing neural method for power theft in the voltage circuit of electromechanical meter.	

SECTION-C	Attempt ANY ONE following Question	Marks (1X7=7)
Q6(a)	What are the responsibilities of an energy manager? Discuss the types of energy audit.	
Q6(b)	What are different types of DSM activities and also Explain the DSM strategies.	

SECTION-C	Attempt ANY ONE following Question	Marks (1X7=7)
Q7(a)	Illustrate different steps adopted by government for energy conservation in detail.	
Q7(b)	What are Energy conservation aspects and also explain instrumentation and measurements.	