

Hall Ticket Number :

R-17

Code: 7G283

IV B.Tech. II Semester Advanced Supplementary Examinations July 2022

Renewable Energy Sources

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. How can solar energy be converted into electrical Energy? Give a diagram showing the elements of such a plant.	14M		V
OR			
2. Describe extraterrestrial and terrestrial solar radiation.	14M		II
UNIT-II			
3. a) Draw a neat sketch of solar flat plate collector and explain its working principle.	7M		III
b) Discuss the advantages and disadvantages of flat plate collector	7M		VI
OR			
4. Name the various types of Solar water heating systems and explain about each of them	14M		I
UNIT-III			
5. a) Principle used in the measurement of speed of the wind Discuss?	7M		I
b) Tabulate the main applications of wind energy	7M		I
OR			
6. Minimum tidal range required for the working of tidal power plant-Examine	14M		I
UNIT-IV			
7. Explain the different types of ocean thermal energy conversion systems.	14M		II
OR			
8. a) Draw and explain the schematic layout of a tidal powerhouse	7M		III
b) What are MHD generators? Explain its principal and working	7M		I
UNIT-V			
9. Illustrate the advantages and disadvantages of direct energy conversion	14M		II
OR			
10. Give short notes on superconductivity and gas conductivity	14M		II

Hall Ticket Number :										
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R-17

Code: 7G288

IV B.Tech. II Semester Advanced Supplementary Examinations July 2022

Energy Auditing and Demand Side Management

(Electrical and Electronics Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

	Marks	CO	Blooms Level
UNIT-I			
1. Explain clearly what you understand by Energy audit in industry.	14M	1	2
OR			
2. Explain pie-chart, Sankey diagrams and Load profiles	14M	1	2
UNIT-II			
3. a) Explain in detail about how to conserve electrical energy.	7M	2	2
b) Discuss the Energy conservation Technologies.	7M	2	2
OR			
4. a) Discuss energy situation in world and in India	7M	2	2
b) Explain Rules for efficient energy conservation schemes	7M	2	2
UNIT-III			
5. a) Explain clearly the loss distribution in energy efficient motors	7M	3	2
b) Write merits and demerits of energy efficient motors.	7M	3	2
OR			
6. Discuss in detail about Good lighting system design and practice.	14M	3	2
UNIT-IV			
7. Summarize notes on:			
a). Applications of PLC's.			
b). Thermocouples c) Lighting control	14M	4	2
OR			
8. a) Explain the time value of money concepts	7M	4	2
b) Explain the payback analysis	7M	4	2
UNIT-V			
9. a) Discuss in detail Demand Side Management and its benefits.	7M	5	2
b) Explain the techniques of Demand Side Management	7M	5	2
OR			
10. a) Explain about energy efficient equipment & load management.	7M	5	2
b) Discuss about load priority technique & strategic conservation.	7M	5	2

END