BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - VIII ELECTRICAL :SUMMER- 2022
SUBJECT : ENERGY MANAGEMENT

Day : Wednesday
Date : 22-06-2022

S-13354-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.:

1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Assume suitable data if **NECESSARY.**

Q.1 Write a Brief note on Indian and Global Energy Scenario. **(10)**

OR

Describe principles of Energy Management. What is Energy Policy? Illustrate format of Energy Policy.

Q.2 Discuss Analysis and Recommendations of Energy Audit for a typical sugar cane installation. **(10)**

OR

Write a brief note on Bench-marking energy performance of an industry.

Q.3 Explain: **(10)**

i) Simple Payback period
ii) Time Value of Money
iii) Net present Value
iv) Return on Investment
v) Internal Rate of Return

OR

Describe significance of costing of utilities like determination of cost of steam, natural gas, compressed air and electricity.

Q.4 Describe in detail the properties to be considered for trouble free installation of steam trap and selection of steam trap **(10)**

OR

Discuss the case studies based on environmental benefits achieved, heat loss minimization, energy efficiency and problems.

Q.5 **a)** Discuss the market aspects of load management. **(05)**

b) What are the parameters related to overall motor performance and what environmental information should be included? **(05)**

OR

a) Why do we care about power factor? How it can be improved and what are its benefits? **(05)**

b) Discuss the various reasons for promoting Demand Side Management. **(05)**

Q.6 **a)** Describe the factors affecting waste heat recovery feasibility. **(07)**

b) Write the possible sources of waste heat, their quality and uses. **(03)**

OR

a) What is Cogeneration? How the heat to power ratio influence the selection of Cogeneration System? **(05)**

b) Discuss the different combinations of power and heat producing equipment. **(05)**

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