

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

Day : Tuesday

Time : 02:30 PM-05:30 PM

Date : 29-11-2022

W-13354-2022

Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Assume suitable data if **NECESSARY**.
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Q.1 What is the impact of Energy use on Environment? (10)

OR

Write a brief note on Indian and global energy scenario.

Q.2 Describe need, types and components of Energy Audit. (10)

OR

Discuss outcome of Energy Audit and energy saving potential with suitable example.

Q.3 Explain costing of utilities like cost of steam, natural gas, electricity etc. Also explain how the costing of utilities help to perform Energy Audit of the industry. (10)

OR

Explain

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

Q.4 List the features of steam piping, guide lines for proper drainage and discuss the details of steam pipe sizing and design. (10)

OR

Evaluate the performance of a typical furnace and discuss the methods for calculating the efficiency of furnace.

Q.5 a) Discuss the impact of load management on the total electricity system. (06)

b) What are the Motor Efficiency Testing Standards? (04)

OR

a) What is Supply Side Management? What is the necessity of Supply Side Management? (05)

b) What is the criteria for selection and location of Capacitors? (05)

Q.6 a) Discuss the Waste Heat Recovery technologies. (07)

b) Enlist the Challenges for recovering low temperature waste heat. (03)

OR

Discuss the types of Cogeneration System with neat diagram. (10)