Total No. of Questions : 12]

SEAT No. :

P760

[Total No. of Pages : 2

[4659]-388

B.E. (Automobile Engineering)

ENERGY ENGINEERING AND MANAGEMENT

(Elective - IV (b)) (2008 Pattern) (Semester - II)

Time : 3 Hours] *[Max. Marks : 100*

Instructions to the candidates :

1) ***Answer any three questions from each section.***
2) ***Answer three questions from Section - I and three questions from Section - II.***
3) ***Neat diagrams must be drawn wherever necessary.***

SECTION - I

Unit - I

Q1) a) Detailed out Indian Energy policy and prising. **[9]**

b) Explain Indian Energy needs for growing economy and Demand site management. **[9]**

OR

Q2) a) Give global Energy consumption pattern and effect of energy on environment. **[9]**

b) Brief discussion on Energy Conservation Act 2001. **[9]**

Unit - II

Q3) a) Explain Renewable Energy sources and discuss any one application in detailed with working. **[8]**

b) Brief discussion on Need of Renewable energy sources and explain Hydro Electric power plant. **[8]**

OR

Q4) a) Explain in detailed recent trends in Renewable energy technologies. **[8]**

b) Explain Bio-Energy and application of Bio-Energy with neat sketch. **[8]**

Unit - III

Q5) a) Write down stepwise Energy Audit Methodology in detailed? **[6]**

b) What are the energy conservation opportunities in Air compressor? **[4]**

c) Gives out Energy conservation opportunities in process industries. **[6]**

OR

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Q6) a) Explain different instrument used in Energy Audit detailed out any 5. **[10]**

b) Short Note : **[6]**

i) Energy Balance.

ii) Energy Surveying.

SECTION - II

Unit - IV

Q7) a) What are the different Energy conservation opportunities in Boiler system. **[8]**

b) Explain steam turbine working and losses in steam turbine. **[8]**

OR

Q8) What are different Energy conservation opportunities in

a) Chillers **[6]**

b) Cooling Tower **[4]**

c) Furnaces **[6]**

Unit - V

Q9) a) Explain principles of Energy Management. **[6]**

b) Energy consumption study of furnace. **[4]**

c) Explain lightning system and Energy conservation opportunities in that system. **[6]**

OR

Q10) a) Explain co-generation system and type of co-generation system in detailed. **[10]**

b) Detailed out case study of Ice factory with ECM. **[6]**

Unit - VI

Q11) a) What is Internal Rate of Returns (IRR) and Sensitivity Analysis. **[9]**

b) Distinguish between Sensitivity analysis and Risk analysis of energy financing. **[9]**

OR

Q12) Write any 3 short note : **[18]**

a) Energy project forecasting and Management.

b) Various technique use in financial analysis of energy sector.

c) Energy Economics.

d) Investment needs in energy sector.

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