

Total No. of Questions : 6]

SEAT No. :

P93

[Total No. of Pages : 2

OCT/BE/Insem.-17

B.E. (Mechanical Engg.) (Semester - I)

ENERGY AUDIT AND MANAGEMENT (Elective - I)
(2012 Pattern)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Figures to the right indicate full marks.*
- 2) *Draw neat figures wherever necessary.*
- 3) *Use of scientific calculators is allowed.*

- Q1)** a) Discuss world energy scenario in context of natural gas, oil and coal. **[5]**
b) Write schemes/projects undertaken by Govt. of India for renewable energy sources. **[5]**

OR

- Q2)** a) Write short notes on i) Energy action planning ii) Energy security **[5]**
b) Write note on energy and environment. **[5]**

- Q3)** a) What are different Energy Conservation Opportunities in Steam System? **[6]**
b) Explain Energy Audit report format. **[4]**

OR

- Q4)** a) What are different Energy Conservation Opportunities in Compressed Air System? **[6]**
b) Explain in brief the "position of energy manager" and "energy committee" in an organisation? **[4]**

P.T.O.

- Q5) a)** A sum of Rs. 20,000 is deposited in a bank at the beginning of a year. The bank pays 6% interest annually. How much money is in the bank account at the end of the fifth year, if no money is withdrawn? **[5]**
- b)** What is the NPV of a Project, (life 2 year) which requires an investment of Rs. 50000 and yield Rs. 30000 in the 1st year and Rs. 40000/- in the next year, if the Interest rate is 10%. **[5]**

OR

Q6) A company invests Rs. 12 lacks and completes an energy efficiency project at the beginning of year 1. The firm investing its own money and expects an Internal rate of return IRR of at least 24% on constant positive annual net cash flow of Rs. 2.5 Lacks over a period of 5 years starting from year. 1.

- a)** Will project meet the firm's expectations?
- b)** What is the IRR of this measure?

[10]

