

22312

23124

3 Hours / 70 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: 10**
 - a) Define colorific value.
 - b) Define Biomass.
 - c) Define commercial and non commercial energy sources.
 - d) List out four instruments used for energy audit.
 - e) State importance of economics in market.
 - f) Define economics.
 - g) List various types of costs with examples.

- 2. Attempt any THREE of the following: 12**
 - a) Explain the importance of clean energy technologies.
 - b) Explain the construction and working of solar water heater.
 - c) Describe energy conservation and it's importance.
 - d) Explain net present worth method.

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- 3. Attempt any THREE of the following:** **12**
- a) Describe the energy policy with respect to national and international.
 - b) Classify new energy sources with their industrial applications.
 - c) Explain the construction and working of biogas plant.
 - d) Describe the procedure of energy audit.
- 4. Attempt any THREE of the following:** **12**
- a) Explain quality and concentration of energy sources.
 - b) Explain the concept of tidal energy conversion.
 - c) State any four environmental benefits of wind energy.
 - d) Describe energy conservation act.
 - e) Explain primary energy resources in detail.
- 5. Attempt any TWO of the following:** **12**
- a) Describe the concept of direct and indirect cost.
 - b) Explain law of demand and law of supply.
 - c) Explain the concept of simple, compound and continuous interest.
- 6. Attempt any TWO of the following:** **12**
- a) Describe the concept of income tax, excise tax and property tax.
 - b) Describe any three methods of calculation of depreciation.
 - i) Straight line method
 - ii) Sinking fund method
 - iii) Sum of the digit method
 - iv) Annuity method
 - v) Written down value method
 - c) Explain the concept of profitability and evaluation of profitability by rate of return on investment method.
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