

22549

**11920**

**3 Hours / 70 Marks**

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Preferably, write answers in sequential order.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) List various non-conventional energy resources.
- (b) Write advantages of conventional energy sources.
- (c) State applications of solar energy.
- (d) State the impact of biomedical waste on health.
- (e) List sources of biomedical waste.
- (f) State the meaning and significance of autoclaving.
- (g) List segregation categories of waste.

**2. Attempt any THREE of the following :**

**12**

- (a) Write disadvantages of non-conventional energy sources.
- (b) Explain PV cell using suitable diagram.
- (c) State the features of Electricity Act 2003.
- (d) Give classification of biomedical waste.

- 3. Attempt any THREE of the following : 12**
- (a) Distinguish between conventional and non-conventional energy sources.
  - (b) Enlist components of wind turbine. Write principle of wind power.
  - (c) Explain the importance of energy audit.
  - (d) Describe need of biomedical waste management.
- 4. Attempt any THREE of the following : 12**
- (a) Describe conventional power plants.
  - (b) State different types of solar collectors.
  - (c) Explain laws regarding environment protection.
  - (d) Describe effect of medical waste on environment.
  - (e) Describe the different types of labels used for biomedical waste.
- 5. Attempt any TWO of the following : 12**
- (a) Describe the present scenario of energy in Maharashtra and India.
  - (b) Describe WHO guidelines on management of waste from hospitals wastes.
  - (c) Draw and explain flow chart of biomedical waste management processes.
- 6. Attempt any TWO of the following : 12**
- (a) Explain factors affecting the production of biogas from biomass.
  - (b) Describe Energy Conservation Act 2001. Also state its features.
  - (c) State safety and precautionary measures used for waste management.
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