

22549

22232

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.

**Marks**

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

**10**

- (a) Define Autoclave.
- (b) State advantages of Solar Energy system.
- (c) Define Plasma Pyrolysis technology.
- (d) List any four non-conventional energy sources.
- (e) Enlist sources of biomedical waste.
- (f) State any two effects of medical waste on environment.
- (g) Draw flow chart of biomedical waste management process.

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

**12**

- (a) Explain need of biomedical waste management system in hospitals.
- (b) Explain wind turbine using suitable diagram.
- (c) Enlist disadvantages of conventional energy sources.
- (d) State the features of Electricity Act, 2003.



- 3. Attempt any THREE of the following : 12**
- (a) Compare conventional and non-conventional energy sources.
  - (b) Explain Environment Protection Law in detail.
  - (c) Explain biogas production using suitable diagram.
  - (d) Explain various biochemical waste hazards on human health.
- 4. Attempt any THREE of the following : 12**
- (a) Explain Energy Conservation Act, 2001.
  - (b) Explain the concept of conventional power plant.
  - (c) Describe remedies for pathological waste in hospitals.
  - (d) Describe guidelines given by WHO for health care waste management.
  - (e) Explain limitations of wind power generation.
- 5. Attempt any TWO of the following : 12**
- (a) Describe microwave irradiation process used in biomedical waste treatment.
  - (b) Give classification of Biomedical waste and explain it in detail.
  - (c) Describe the present scenario of energy in Maharashtra.
- 6. Attempt any TWO of the following : 12**
- (a) Explain : (i) Digital Tachometer  
(ii) Lux meter
  - (b) Describe different types of solar collectors.
  - (c) Explain safety & precautionary measures to be taken during handling of waste in hospitals.
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