

22549

23124

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.

Marks

1. Attempt any FIVE :

10

- (a) Describe present scenario of energy in Maharashtra.
- (b) Enlist two advantages of non-conventional energy sources.
- (c) Write four solar energy applications.
- (d) Write any four sources of biomedical waste.
- (e) Write significance of biomedical waste management system.
- (f) State the autoclaving technique for biomedical waste management.
- (g) Draw flow chart of biomedical waste management process.

2. Attempt any THREE :

12

- (a) Write in detail four limitations of conventional power plants.
- (b) Explain flat plate collector with neat sketch.
- (c) Describe the importance of Energy Audit.
- (d) Explain impact of bio-chemical waste on human health.



- 3. Attempt any THREE :** **12**
- (a) Describe the environmental pollution due to medical waste.
 - (b) Explain the working principle of wind energy turbine.
 - (c) Discuss the limitations of non-conventional energy sources in detail (any four).
 - (d) Describe the features of Energy Conservation Act, 2001.
- 4. Attempt any THREE :** **12**
- (a) Draw block diagram of thermal power plant, name various components and explain working of it.
 - (b) List various components of wind turbine and write function of each part. Also state merits and limitations of wind energy turbine.
 - (c) State the need of energy conservation and suggest various ways for energy conservation.
 - (d) Discuss the impact of radiological and pathological waste on human being.
 - (e) Explain plasma pyrolysis method for biomedical waste and disposal.
- 5. Attempt any TWO :** **12**
- (a) State any four advantages and any four limitations of solar energy.
 - (b) Describe WHO guidelines for management of a specific waste of hospital.
 - (c) Describe microwave irradiation process used in biomedical waste management.
- 6. Attempt any TWO :** **12**
- (a) Explain biogas production from biomass using a suitable diagram.
 - (b) Explain the various laws regarding environmental protection.
 - (c) Describe safety and precautionary measures used for waste management.
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