

22511

24225

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 answer 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 Ecology.
 - b) State the effect of ozone depletion.
 - c) List gaseous pollution control equipments. (Any four)
 - d) List any four pollution emitted from nitric acid plant.
 - e) Name any two tertiary waste water treatment methods.
 - f) State the chemical characteristics of waste water. (Any four)
 - g) Write two functions of pollution control board.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Describe Sulphur Cycle with neat diagram.
 - b) Explain the method of Absorption for gaseous pollution control.
 - c) Describe process of collection of solid waste.
 - d) List any eight benefits of ISO 14000.
- 3. Attempt any THREE of the following:** **12**
- a) Describe effect of SO_x and NO_x on human health.
 - b) Explain 3R Principle for solid waste management.
 - c) Explain the process of Reverse Osmosis for waste water treatment.
 - d) Describe with neat sketch Venturi scrubber.
- 4. Attempt any THREE of the following:** **12**
- a) Explain Terrestrial ecosystem.
 - b) Describe in detail sanitary landfill method.
 - c) Explain any one method for recovery of energy from waste.
 - d) Explain preliminary method of waste water treatment.
 - e) Write any four features of air quality act 2004.
- 5. Attempt any TWO of the following:** **12**
- a) Explain construction and working of Electrostatic Precipitator with a neat sketch. Write any two applications of it.
 - b) Describe any three Bio-medical waste treatment methods.
 - c) Explain Trickling filter with neat sketch.
- 6. Attempt any TWO of the following:** **12**
- a) Explain food chain and food web.
 - b) Write working of catalytic convertor with neat diagram.
 - c) Explain the significance of COD and BOD? State the procedure for determination of these parameters.
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