

22511

12223

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) 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 –
 - i) BOD
 - ii) COD
 - b) Write names of gases causing Ozone layer depletion.
 - c) Define Ecology.
 - d) List any four pollutants emitted from Nitric acid plant.
 - e) List any four equipment used for the control of gaseous pollutant.
 - f) Write any two applications of fabric filter.
 - g) Write any four sources of air pollution.

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Explain 3R principle in context with solid waste management.
 - b) List any eight benefits of ISO 14000.
 - c) Explain Nitrogen cycle with neat sketch.
 - d) Explain the application of froth flotation in waste water treatment.
- 3. Attempt any THREE of the following :** **12**
- a) State the role of state Pollution Control Board.
 - b) Explain structure of eco-system with neat sketch.
 - c) Describe effect of carbon monoxide and sulfurdioxides on human health.
 - d) Describe methods of solid waste collection.
- 4. Attempt any THREE of the following :** **12**
- a) Write any four salient feature of Air (Prevention and control of Pollution) act 1981.
 - b) Describe segregation, storage and transportation in case of biomedical waste.
 - c) Explain working of catalytic converter with neat sketch.
 - d) List out chemical characteristics of waste water with description. (Any four)
 - e) Explain reverse osmosis process used in waste water treatment.

5. Attempt any TWO of the following :**12**

- a) Explain construction and working of bag filter.
- b) Explain activated sludge treatment with diagram.
- c) Explain causes and effects of Global warming. List Green house gases.

6. Attempt any TWO of the following:**12**

- a) Explain Trickling filter with neat sketch.
 - b) Explain principle and working of electrostatic precipitator with neat sketch.
 - c) Explain any three treatment methods of Bio-medical waste.
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