

[Time: 2½ Hours]

[ Marks:60]

Please check whether you have got the right question paper.

- N.B:**
1. Draw labeled Diagrams wherever required.
  2. **Figures** to the **right** indicate **full marks**.
  3. **All** questions are **compulsory** and carry **equal Marks**.

- Q.1 a) What is the treatment given for agricultural waste & its management? 06  
 b) What is the special Aerobic waste water treatment? 06  
 OR
- Q.1 How are Biosensors used in waste treatment and discuss Nitrogen and Phosphate removal from waste water? 12
- Q.2 a) Explain the states of soil contamination in different countries. 06  
 b) Discuss microbial degradation of timber. 06  
 OR
- Q.2 What is the process of soil clean-up and future for soil bioremediation? 12
- Q.3 a) Given Significance of Bio filters and Bio scrubbers in waste gas treatment. 06  
 b) Discuss the recycling of medical waste. 06  
 OR
- Q.3 Discuss measures taken to protect the biodiversity, Discuss the levels of biodiversity & the management of germ plasm collection. 12
- Q.4 a) Explain the method to manufacture bio fertilizer. 06  
 b) Discuss the significance of neem as a bio pesticide. 06  
 OR
- Q.4 Discuss the mechanism of Nitrogen fixation in Plants and give method to apply bio fertilizer to the soil. 12
- Q.5 Write Short notes (any 03) 12
- a) Organic matter removal from potable water.
  - b) Laws and directives on waste and waste water.
  - c) Composting technology.
  - d) Conservation efforts by G-15 countries.
  - e) Safety testing of bio insecticide.
  - f) Disadvantages of bio herbicides