MODEL QUESTION PAPER

13.803 ENVIRONMENTAL POLLUTION: CONTROL, DESIGN AND MODELLING (H)

Time: 3 Hours Max. Marks: 100

PART A

Answer all questions. Each question carries 2 marks.

1. Explain briefly on the ozone layer depletion
2. Define criteria pollutants with example
3. Explain inversion. Elaborate on how inversion will affect the dispersion of pollutants
4. Discuss any two aerobic methods available for sludge treatment
5. Suggest a method to determine BOD in waste water
6. Explain briefly on solid waste characteristics
7. Write a note on aerated lagoon
8. Distinguish between loudness and annoyance
9. Briefly explain on nuclear waste
10. Write short notes on environmental management (10x2=20 Marks)

PART B

Answer any one question from each module

Module – 1

11. Explain the following terms:
    a) Environmental Lapse Rate
    b) Adiabatic Lapse Rate
    c) Plume behavior
    d) Neutral Atmosphere **20**

OR

12. With the help of a neat sketch explain the principle, construction and working of a Cyclone Separator **20**

Module – 2

13. (a) Differentiate between activated sludge process and trickling bed filter **10**

    (b) Explain with a neat diagram the operation of aerobic process for treating sewage **10**

OR

14. (a) Discuss the waste water scheme used in sugar industry **10**

(b) Differentiate between water quality characteristics of surface water and ground water resources **10**

Module – 3

15. (a) Discuss the methods used for the collection of solid waste **10**
    (b) Explain on the sources and classification of solid waste **10**

OR

16. a) Explain how nuclear wastes are disposed and the risks involved **15**
    b) Define composting **5**

Module- 4

17. a) Explain in detail about noise mitigation with example **10**

    b) Elaborate on Kyoto and Montreal protocol **10**

OR

18. Explain on
    (a) Life cycle assessment **10**
    (b) Green production **10**
