

Seventh Semester B. E. Civil (CBS)
Examination

AIR POLLUTION AND SOLID WASTE
MANAGEMENT

(Elective - I)

Time : Three Hours]

[Max. Marks : 80

- N. B. :
- (1) All questions carry marks as indicated.
 - (2) Due credit will be given to neatness and adequate dimensions.
 - (3) Assume suitable data wherever necessary.
 - (4) Diagrams and Chemical equations should be given wherever necessary.
 - (5) Illustrate your answers wherever necessary with the help of neat sketches.
 - (6) Use of non programmable calculator is permitted.

1. (a) Explain the effects of air pollution on human and materials. 6
- (b) What are the types of sources of air pollutants ? Briefly explain them. 7

OR

2. (a) How does air pollution affects the different Zones of atmosphere ? 7
- (b) Distinguish between :—
 - (1) Primary and secondary air pollutant.
 - (2) Stationary and mobile source air pollution. 6

3. (a) Explain the different types of plume behavior with neat sketches. 6
(b) Explain the meteorological factors influencing the air pollution. 7

OR

4. (a) Explain stack air sampling in industry. 6
(b) Write short note on (Any two) :—
(1) Wind rose diagram.
(2) Determination of stack height.
(3) High volume sampler (HVS). 7
5. (a) What are the ill effects and remedies of noise pollution ? 7
(b) What are principles on which gaseous control equipments work ? Explain any two. 7

OR

6. (a) Write short note of electrostatic precipitator (ESP). 7
(b) Write short note on pollution due to diesel and petrol engines. 7
7. (a) Define 'solid waste'. Explain the various sources of generation of solid waste. 7
(b) Explain the physical and chemical characteristics of solid waste. (Any two each). 6

OR

8. (a) Write down the functional elements of solid waste management. 6
- (b) Write notes on (any two) :—
- (1) Sampling of solid waste.
 - (2) Necessity and responsibility of solid waste management.
 - (3) Quantity and Quality of solid waste. 7
9. (a) Explain the various methods of collection of solid waste from house-house with neat sketches. 7
- (b) Explain transfer station and state it's types. 6

OR

10. (a) Describe various types of transportation vehicle used for collection and transportation of solid waste. 7
- (b) Write notes on (any two) :—
- (1) Optimization of transport route.
 - (2) Methods for separation of solid waste.
 - (3) 3-R concept of solid waste. 6
11. (a) What is 'sanitary landfilling' ? State the various site requirement for sanitary landfilling. 7
- (b) Define 'Composting'. Explain the different types of composting. 7

OR

12. (a) Draw a neat sketch of 3T diagram and state the advantages and disadvantages of incineration.

7

(b) How to control leachate and gas from sanitary land fill ?

7