

B.E. (Civil Engineering) Model Curriculum Semester-VIII
PEC-1-CE801 - Air Pollution and Solid Waste Management

P. Pages : 2

Time : Three Hours



GUG/W/24/14334

Max. Marks : 80

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- Notes :
1. All questions carry equal marks.
 2. Due credit will be given to neatness and adequate dimensions.
 3. Assume suitable data wherever necessary.
 4. Diagrams and Chemical equation should be given wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) Explain standard of air pollution as per I.S. 8
b) Write in detail about Air Pollution Episodes. 8

OR

2. a) What is atmosphere and explain all zones of atmosphere in detail. 8
b) Write a note on its effect of air pollution on human health. 8
3. a) Define Wind Rose. Explain the importance of wind roses in air pollution studies. 8
b) Explain different types of plumes in detail. 8

OR

4. a) Draw and explain high volume sampler in detail. 8
b) A factory uses 0.3 million liter of fuel oil per month (specific gravity 0.96). It has been estimated that one million liter of oil used per year, the following are the quantity of pollutant observed. 8
 - 1) Particulate matter – 3.5 tonne/year
 - 2) SO₂ – 60.4 tonne/year
 - 3) NO_x – 7.0 tonne/year
 - 4) CO – 0.50 tonne/yearAssuming factory work 300 days for 24 hour. Determine the safe height of chimney for the safe dispersion of pollutant.
5. a) State and explain various types of scrubber used in removal of particulate from gaseous. 8
b) How does sound pollution effect on health and how can be control it. 8

OR

6. a) Write a note on pollution due to petrol and diesel engine. 8
- b) What are various types of equipment used to control particulate matter and explain any one in detail. 8
7. a) Define the municipal solid waste. What are the sources of generation of municipal solid waste. 8
- b) Explain with sketches, 'House to house' collection system. 8

OR

8. a) With neat sketches, discuss the solid waste collection equipments. 8
- b) Write a note on "Transfer station" & its economic use. 8
9. a) What is sanitary landfill? Explain method of sanitary land filling. 8
- b) Draw 3 – component diagram of incineration & explain. 8

OR

10. a) Write a note on composting methods adopted in India. 8
- b) What are the points to be considered while selecting the site for sanitary land filling. 8
