

B.E.(with Credits)-Regular-Semester 2012-Civil Engineering Sem. VII
BE-Elective- I : Air Pollution and Solid Waste Management

P. Pages : 2

Time : Three Hours



GUG/W/16/6523

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
 2. Assume suitable data wherever necessary.
 3. Illustrate your answers wherever necessary with the help of neat sketches.
 4. Use of non-programmable calculator is allowed.

1. a) Define Air Pollution. Give various sources of air pollution with example. 8
- b) Explain various damages to plant due to different air pollutant. 8

OR

2. a) State and explain various collective effect of air pollutant on human health. 8
- b) Explain Loss Angles photo chemical smog with photochemical reactions. 8
3. a) A factory uses 0.28 ML of oil per month with average working does of 25 per month. Factory runs for 21 hours at a day. Following are the concentration of pollutant emitted through factory for one ml of oil used in year. 8
 - i) Particulate matter – 5.5 t/yr.
 - ii) SO₂ - 5.8 t/yr.
 - iii) NO₂ - 3.5 t/yr.
 - iii) CO – 1.2 t/yr.
 - iv) HC – 1.0 t/yr.

Determine the safe height of chimney for the safe dispersion of the pollutant.

- b) What is green house effect. State and explain with neat sketches. 8

OR

4. a) Explain Ozone layer. Ozone layer in the atmosphere is known as "Earth protective umbrella". 8
- b) Explain how S.P.M. concentration monitoring is carried out by using H.V.S. 8
5. a) What are various types of automobile exhaust emissions? How it is controlled. 8
- b) What is cyclone? Explain the function of cyclones as a pollution collection devices. Also state the advantages and disadvantages of it. 8

OR

6. a) What is noise pollution How it can be controlled. 8
- b) What is bag filter? Explain its working. 8

7. a) What is solid waste. Give the composition of solid waste generated in the township of India. Give the reason for the higher and lower percentage of components. 8
- b) What are the things to be kept while sampling. 8

OR

8. a) What is Heuristic method. What are the guiding principles and general steps involved in heuristic method. 8
- b) Give the classification of solid waste with their sources. 8
9. a) What are the site requirement of sanitary land filling explain in detail. 8
- b) Explain the principle of incineration and its advantages and disadvantages. 8

OR

10. Write a short note on : 16
- i) Leachate collection.
- ii) Transfer Station
- iii) Recovery of Methane
- iv) Three component diagram in incineration.
