



Reg. No. :

Name :

**Seventh Semester B.Tech. Degree Examination, November 2015
(2008 Scheme)**

08.705.6 (Elective – III) AIR QUALITY MANAGEMENT (C)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. Discuss the components of environment.
2. What are the sources of air pollution ?
3. Explain indoor air pollution.
4. What are the limitations of Gaussian plume model ?
5. Discuss the effect of wind velocity and turbulence in the atmosphere.
6. Discuss Pasquill's stability curve.
7. Enlist the various particulate control equipment.
8. Write a short note on air pollution disasters. (8×5=40 Marks)

PART – B

Answer **any one full** question from **each** Module.

MODULE – I

9. Discuss in detail the general effects of air pollutants on health, vegetation, animals and materials. 20

OR

10. a) Discuss the scale of air pollutant measurement. 10
b) What is photochemical smog ? How it is formed ? Explain its harmful effects. 10



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MODULE – II

11. What do you understand by atmospheric dispersion ? Write down the equation for determining ground level concentration of pollutant. When does the maximum ground level concentration occurs ? 20

OR

12. Explain with the help of a diagram the various types of plume behaviour. 20

MODULE – III

13. a) Explain with a neat sketch the working of an electrostatic precipitator. 12

- b) Determine the plate area required to collect a $0.6 \mu\text{m}$ particle with 92% efficiency for a gas flow of $10 \text{ m}^3/\text{sec}$ through an electrostatic precipitator. The particle velocity was found to be 0.15 m/sec . 8

OR

14. Explain in detail the control techniques for SO_x , NO_x , CO_x and HCS. 20