

[01 - 4224]

IV/IV B.E. DEGREE EXAMINATION.

Second Semester

Civil Engineering

Elective III — AIR POLLUTION AND ITS CONTROL

(Common for Civil and Civil Environmental
Engineering)

(Effective from the Admitted Batch of 2006-2007)

Time : Three hours

Maximum : 70 marks

Answer question No.1 and any FOUR of the remaining
questions.

All questions carry equal marks.

1. (a) Distinguish the primary and secondary air pollutants.
- (b) Define lapse rate and negative lapse rate.
- (c) Explain the terms necrosis and Abscission with respect to leaf damage due to air pollution.
- (d) What are the objectives of using control equipment?

- (e) What is meant by aerosols? List the different types of aerosols.
 - (f) What are the gases emitted during green house effect?
 - (g) What is double inversion?
2. (a) Define air pollution. Explain various sources of air pollution with suitable examples.
- (b) Explain the factors to be considered for industrial plant location.
3. (a) What is atmospheric stability? Explain the temperature inversions with reference to air pollution.
- (b) Explain plume behaviour in detail.
4. (a) How SO_x and NO_x emissions effect human health and the growth of plants?
- (b) Describe various types of economic effects caused by Air Pollutants.
5. (a) Classify the filters used to control of air pollution. With a sketch explain the principle, construction and working of a fabric filter.
- (b) With the help of diagram explain the functioning of an electrostatic precipitation.

6. (a) Describe the stack monitoring. (4)
 - (b) Differentiate between SPM and Aerosol. (3)
 - (c) How temperature, pressure, wind speed affect the dispersion of air pollutions.
 7. (a) Explain the pollution due to automobiles and how it can be controlled.
 - (b) What are the various secondary pollutants? How are they formed?
 8. Write short notes on any three of the following.
 - (a) Ozone layer depletion
 - (b) Setting chambers
 - (c) Smoke and fume
 - (d) Wet collectors.
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