Code: EE6T6FE-A, EC6T6FE-B, IT6T5FE-A, ME6T6FE-A, CS6T5FE-A.

III B.Tech - II Semester – Regular Examinations – May 2017

AIR POLLUTION AND CONTROL
(COMMON FOR EEE, ECE, IT, ME & CSE)

Duration: 3 hours   Max. Marks: 70

PART – A

Answer *all* the questions.   All questions carry equal marks

$11 \times 2 = 22$ M

1.

   a) Discuss the effects of PAN on plants.

   b) Give comparative picture of natural and artificial sources of air pollution.

   c) Write a short note on Atmospheric stability.

   d) What is a wind rose diagram? Explain with a neat sketch.

   e) Explain the principle and working of a cyclone separator, with a sketch.

   f) List out the names of different equipments for controlling particulates.

   g) Briefly discuss the different control measures adopted to check the air pollutants emitted by automobiles.

   h) Explain the diffusion theories.

   i) Define air quality standards.

   j) Describe proportional sampling in detail.

   k) Briefly explain the air pollution control method adopted in Delhi in 2016.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

$$3 \times 16 = 48 \text{ M}$$

2. a) Explain photo chemical smog and coal - induced smog.

8 M

   b) Explain the causes and effects of ozone layer depletion in stratosphere.

4 M

   c) Explain the causes and effects of acid rain.

4 M

3. a) List the meteorological parameters that influence the dispersion of pollutants in atmosphere.

8 M

   b) Sketch and explain different kinds of plumes depending upon different environmental conditions (any four).

8 M

4. a) Explain with a neat sketch, the principle and construction of fabric filter. Give applications.

8 M

   b) List the various procedures for controlling the emissions of SO_x. Explain how do you control the emission of SO_x using:

      i) Natural dispersion by dilution
      ii) Desulphurization
      iii) Alternate fuels.

8 M

5. a) Briefly explain control of air pollution by dilution.   8 M

   b) How internal separators can control air pollution? Explain the working with the help of neat sketches.   8 M

6. a) Write short notes on Ambient Air quality monitoring.   8 M

   b) Briefly explain different types of sampling.   8 M