

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

**III B.Tech - II Semester – Regular/Supplementary Examinations
AUGUST 2021**

**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

11x 2 = 22 M

1.

- a) Is photochemical smog secondary pollutant? Justify.
- b) List the global effects of air pollution.
- c) Outline the importance of wind rose.
- d) Define Lapse rate. What factors influence the Lapse rate?
- e) Classify mechanisms of removing particulate matter from gas stream.
- f) List the advantages of adsorption.
- g) Compare wet and dry methods to control dust particles in air.
- h) What is stack? What is its importance in air pollution?
- i) List the major standards of flue gases released from thermal power plants.
- j) Define isokinetic condition.
- k) Give the advantages and disadvantages of gravity settling chamber.

PART – B

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

3 x 16 = 48 M

2. a) Classify and enlist the various sources of air pollution with their pollutants. 8 M
- b) Define acid rain. Illustrate the effects of acid rain on humans, plants and soil. 8 M
3. a) List the major properties of atmosphere and explain their importance. 4 M
- b) Explain the Gaussian dispersion model with assumptions and limitations. 12 M
4. a) Explain the principles, construction and working of an electro static precipitator. 8 M
- b) Describe the removal and control technologies for NO_x. 8 M
5. a) With examples explain the air pollution control by process change and catalyst reduction. 8 M
- b) What do you mean by air pollution control by dilution? What are the factors influence air pollution dilution? Explain. 8 M
6. a) What are the major methods of gaseous pollutant measurements? Explain them briefly. 8 M
- b) What do you mean by air quality management? Explain its role and importance in present situations. 8 M