

**B. TECH.**  
**(SEM IV) THEORY EXAMINATION 2018-19**  
**AIR POLLUTION & CONTROL ENGINEERING**

**Time: 3 Hours****Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.

**SECTION A**

**1. Attempt *all* questions in brief. 2 x10 = 10**

- a. Define different types of air pollutants.
- b. Write short note on impact of air quality on human health.
- c. What are various sources of air pollution?
- d. Describe AQI.
- e. What is Environmental Management System?
- f. Describe EIA.
- g. Enlist the various devices used in air quality monitoring.
- h. What do mean by absorption sampling?
- i. Give the advantages of gravitational sampling chamber.
- j. Enumerate various impacts of air pollution on environment.

**SECTION B**

**2. Attempt any *three* of the following: 10 x 3 = 30**

- a. What is screening process? Write down the importance of consideration of alternative path in EIA process.
- b. Briefly explain the effects of varying concentrations of CO, SO<sub>2</sub>, H<sub>2</sub>S, NO and NO<sub>2</sub> in air.
- c. Describe wet scrubber along with diagram.
- d. What are the various legal aspects for control of industrial air pollution?
- e. Discuss the effects of urbanization and industrialization on human health.

**SECTION C**

**3. Attempt any *one* part of the following: 10 x 1=10**

- (a) Describe maximum mixing depth phenomenon in detail with neat diagram. How it is related to ventilation coefficient?
- (b) Explain the working principle of ESP with neat diagram

**4. Attempt any *one* part of the following: 10 x 1= 10**

- (a) Write short note on-
  - a) Disaster management plan
  - b) Sampling and analysis
- (b) Define Air (Prevention and Control of Pollution) Act. Discuss its Salient features.

5. Attempt any *one* part of the following: 10 x 1= 10
- (a) Explain Gaussian plume in detail. What is prefeasibility report? Mention salient points of EIA notification, 2006.
  - (b) Name various devices used for air pollution control in industry. Also explain the working of any one of them with neat diagram.
6. Attempt any *one* part of the following: 10 x 1= 10
- (a) Give the classification of atmosphere according to temperature variation.
  - (b) Discuss various mathematical models related to dispersion and transport of air pollutants.
7. Attempt any *one* part of the following: 10 x 1= 10
- (a) Explain various plume behavior with neat diagram.
  - (b) Explain in detail the importance of public participation in environmental decision making?