

Reg. No. :

Question Paper Code : 50306

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2023.

Sixth Semester

Civil Engineering

CE 8005 – AIR POLLUTION AND CONTROL ENGINEERING

(Regulations 2017)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Air pollution.
2. What is ozone layer depletion?
3. Define Fumigation.
4. Describe Eulerian dispersion model.
5. Define electrostatic precipitation.
6. State the principle of cyclone filter.
7. What do you understand by biofilter?
8. State the purpose of air quality monitoring.
9. Define Indoor air pollution.
10. What are the effects of noise on human health?

PART B — (5 × 13 = 65 marks)

11. (a) Write the sources and classification of air pollutants.

Or

- (b) Explain the sampling procedure of ambient air quality sampling. Using high volume sampler for particulates and gases.

12. (a) Discuss the atmospheric factors influencing the dispersion of air pollutants.

Or

- (b) What is adiabatic lapse rate? Discuss the types of adiabatic lapse rate.

13. (a) Explain with a neat sketch of spray tower wet scrubber.

Or

- (b) Derive the expression for the minimum size of particle that can be removed in gravity settling.

14. (a) Discuss the sources of pollutants and its control in a cement industry.

Or

- (b) Discuss Incineration process with sketches.

15. (a) State and discuss the various sources of noise pollution.

Or

- (b) Explain the control methods and preventive measures undertaken for noise pollution.

PART C — (1 × 15 = 15 marks)

16. (a) Discuss the various sampling techniques involved in air pollution study.

Or

- (b) Illustrate the purpose and use of air quality standards and air quality monitoring?