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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Eighth Semester B.Tech Degree Supplementary Examination October 2023 (2019 Scheme)



Course Code: CET464

Course Name: AIRQUALITY MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks.

| | | Marks |
|----|--|-------|
| 1 | What is air pollution? | (3) |
| 2 | Name three sources of indoor air pollutants. | (3) |
| 3 | What are the National Ambient Air Quality Standards (NAAQS)? | (3) |
| 4 | What is the greenhouse effect and how does it contribute to climate change? | (3) |
| 5 | Explain the different types of air pollutants. | (3) |
| 6 | What is the purpose of emission inventory? | (3) |
| 7 | How is particulate matter collected for air quality monitoring? | (3) |
| 8 | Describe the process of scrubbing and its role in controlling air pollution. | (3) |
| 9 | What are the health effects of exposure to sulphur dioxide? | (3) |
| 10 | Compare and contrast the different methods for controlling gaseous air pollutants? | (3) |

PART B

Answer any one full question from each module, each carries 14 marks.

Module I

- 11 a) Explain Pasquill's stability classes? (7)
b) Give a classification of the different types of air pollutants based on different criteria with suitable examples (7)

OR

- 12 a) Explain major air pollution episodes (14)

Module II

- 13 a) Discuss the effects of indoor air pollutants (7)
b) Discuss the effects of air pollutants on human health (7)

OR

- 14 a) Describe the effect of air pollution on environment (7)
b) Write a short note on effect of air pollution on vegetation (7)

Module III

- 15 a) Explain the effect of meteorological factors on dispersion of air pollutant (7)
b) Explain temperature lapse rate (7)

OR

- 16 a) Explain advantages and disadvantages of Gaussian plume model (14)

Module IV

- 17 a) Briefly explain Emission Inventory (5)
-b) Explain the different methods for the collection of gaseous air pollutants (9)

OR

- 18 a) Explain various methods used for the sampling of particulate air pollutants (14)

Module V

- 19 a) Write short note on scrubbing (5)
b) Explain the working of an Electrostatic precipitator for particulate emission control. Also explain its advantages and disadvantages (9)

OR

- 20 a) Explain various methods used for the control of particulate air pollutants (14)
