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0400CET464052402

Reg No.: _____

Name: _____



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Eighth Semester B.Tech Degree Supplementary Examination August 2024 (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 Distinguish between point source and line source of air pollution. | (3) |
| 2 List any three major sources of air pollutants. | (3) |
| 3 Define Greenhouse effect and Global Warming. | (3) |
| 4 How does air pollution affect vegetation? | (3) |
| 5 Discuss the effect of inversion on atmospheric stability. | (3) |
| 6 List the assumptions in Gaussian Plume Model. | (3) |
| 7 Write a note on Stack Sampling. | (3) |
| 8 Bring out the significance of National Ambient Air Quality Standards. | (3) |
| 9 Discuss the application of Spray tower in air pollution control. | (3) |
| 10 What air pollutants do fabric filters reduce and how? | (3) |

PART B

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

Module I

- 11 a) Discuss any three classification of air pollution with examples. (9)
b) How is Bhopal gas tragedy important in the history of air pollution incidents? (5)

OR

- 12 a) Enlist any four major air pollution episodes and compare the causes and effects of any three of them. (14)

Module II

- 13 a) Enumerate the sources and effects of Carbon monoxide. (6)
b) Describe the effect of air pollution on materials and environment. (8)

OR

- 14 a) Define indoor air pollution. Describe the major sources and effects and methods to control it. (10)

- b) Discuss the effects of particulate matter in human health (4)

Module III

- 15 a) Discuss the meteorological factors which influence the dispersion of air pollutants. (8)
b) Explain Pasquill's stability curves in air pollution studies. (6)

OR

- 16 a) Compare Environmental Lapse rate and Adiabatic Lapse rate. (6)
b) What are the different types of Plume? With neat sketches explain any three. (8)

Module IV

- 17 a) Enlist any six methods used for sampling of particulate matter pollutants and discuss the working of any two. (14)

OR

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

Module V

- 19 a) With neat sketch, explain the working of a cyclone separator. (7)
b) Write a note on adsorption in air pollution control. (7)

OR

- 20 a) Discuss any two source correction methods for air pollution control. (7)
b) What is the role of combustion in air pollution control? (7)
