

Reg No:

Name:

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B. TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: CE374

Course Name: AIR QUALITY MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- | | | |
|---|---|-----|
| 1 | a) Define air pollution? Enlist the normal composition of atmospheric air? | (4) |
| | b) Write a short note on effects of air pollution on materials? | (4) |
| | c) Define Indoor air pollution? Write a short note on major indoor air pollutants, effects of indoor air pollution and remedial measures of indoor air pollution? | (7) |
| 2 | a) Differentiate between primary and secondary air pollutants? | (4) |
| | b) Write a short note on Green house effect? | (4) |
| | c) Briefly explain the classification of air pollutants? | (7) |
| 3 | a) Discuss the various effects of air pollution on human life and plant life? | (9) |
| | b) Write a short note on any one major air pollution episode? | (6) |

PART B

Answer any two full questions, each carries 15 marks.

- | | | |
|---|--|-----|
| 4 | a) Enlist the major meteorological factors influencing air pollution? | (4) |
| | b) Write a short note on Gaussian Plume model? | (4) |
| | c) Explain the term atmospheric inversion? What are the different types of atmospheric inversion? | (7) |
| 5 | a) Write a short note on atmospheric stability? | (4) |
| | b) Enlist the major disadvantages of Gaussian plume model? | (4) |
| | c) Define the term Lapse rate? Explain the different types lapse rate in air pollution studies? | (7) |
| 6 | a) Define the term 'Plume' in air pollution? Enlist and explain the different types of plume behaviour with neat sketches? | (9) |

- b) Enlist the major assumptions of Gaussian plume model? (6)

PART C

Answer any two full questions, each carries 20 marks.

- 7 a) Enlist and explain the various principles to be followed for correct sampling of air? (7)
- b) Write a short note on National ambient air quality standards (NAAQS)? (7)
- c) Explain the working of an Electrostatic precipitator for Particulate emission control? (6)
- 8 a) Explain in detail about the various methods used for the sampling of gaseous air pollutants? (7)
- b) Enlist and explain any three particulate emission control methods? (7)
- c) Write a short note on Air quality index (AQI)? (6)
- 9 a) Explain in detail about the various methods used for the sampling of particulate air pollutants? (12)
- b) Give a brief description about the various gaseous emission control methods? (8)
