

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
Sixth semester B.Tech degree examinations (S), September 2020

**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) Explain major air pollution episodes.                       | (10) |
|   | b) Explain photochemical smog.                                 | (5)  |
| 2 | a) Explain effect of air pollution on human health and plants. | (8)  |
|   | b) Explain green house effect.                                 | (7)  |
| 3 | a) Explain primary and secondary air pollutant with example.   | (6)  |
|   | b) Explain effect of carbon monoxide on human health.          | (4)  |
|   | c) Explain components of atmosphere.                           | (5)  |

**PART B**

*Answer any two full questions, each carries 15 marks.*

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|---|---|------|
| 4 | a) Explain the effect of meteorological factors on dispersion of air pollutant. | (9)  |
|   | b) Explain advantages and disadvantages of Gaussian plume model.                | (6)  |
| 5 | a) Explain with neat sketches various plume behavior.                           | (10) |
|   | b) Write short note on atmospheric stability.                                   | (5)  |
| 6 | a) Define inversion .Explain different types of inversion.                      | (10) |
|   | b) Assumptions in Gaussian plume model.   | (5)  |

**PART C**

*Answer any two full questions, each carries 20 marks.*

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|---|--|------|
| 7 | a) Write short note on NAAQS.  | (8)  |
|   | b) Explain various control methods for the removal of gaseous pollutants.  | (12) |
| 8 | a) Explain the working of an Electrostatic precipitator for particulate emission control.<br>Also explain its advantage and disadvantage | (8)  |
|   | b) Explain high volume air sampler   | (12) |
| 9 | a) Explain various methods used for the sampling of particulate air pollutants   | (14) |
|   | b) Write short note on AQI   | (6)  |

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