

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2153504

Date:04/05/2018

Subject Name:Air Pollution Control

Time:02:30 PM to 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Write a note on following : **3.5*2**
- I. Plume rise and Effective stack height
 - II. Maximum mixing depth and Ventilation coefficient
- (b)** Fill in the blanks: **1*7**
- I. GHG stands for.....
 - II. POP stands for.....
 - III. CEPI stands for
 - IV. NAAQS stands for.....
 - V. AQI stands for.....
 - VI. MMD stands for.....
 - VII. VOC stands for.....
- Q.2 (a)** What do you mean by dB(A)? What are the major sources of noise and what kind of control measures can be taken to limit noise exposure? **07**
- (b)** Explain the working principle of Fabric filter with the help of neat diagram. **07**
- OR**
- (b)** Discuss different types of wet scrubbers used in air pollution control. **07**
- Q.3 (a)** What do you understand by inversion? Discuss major types of inversion in detail. **07**
- (b)** What do you mean by dispersion modeling? Explain the Gaussian model with its assumptions and limitations in detail. **07**
- OR**
- Q.3 (a)** What do you understand by atmospheric stability? Discuss all kind of plume behavior in detail. **07**
- (b)** What do you understand by Air quality modeling? What are the categories of models? Discuss in detail with their limitations. **07**
- Q.4 (a)** Discuss working of ESP for air pollution control. **07**
- (b)** What do understand by air pollutant? Give a detailed classification of air pollutants and air pollution sources. **07**
- OR**
- Q.4 (a)** Explain in detail the construction, working, advantages, disadvantages and limitation of settling chamber? **07**
- (b)** What do you understand by ELR? Derive an expression for dry Environmental lapse rate. **07**
- Q.5 (a)** Explain effect of topography on pollutant dispersion with the help of neat diagram. **07**
- (b)** What do you understand by “Greenhouse effect”? Discuss salient features of Kyoto Protocol. **07**
- OR**
- Q.5 (a)** Explain effect of terrain and structure on pollutant dispersion with the help of neat diagram. **07**

- (b) What do you understand by “CFC”? Discuss salient features of Montreal Protocol. **07**
