

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019**

**Subject Code:2161302**

**Date:10/05/2019**

**Subject Name:Fundamentals of Air Pollution**

**Time:10:30 AM TO 01:00 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) Enlist various sources of Air pollutants. **03**  
(b) Give classification of Air pollutants. **04**  
(c) Write a short note on National Ambient Air Quality Standards. **07**
- Q.2** (a) Enlist the types of Inversion. **03**  
(b) Enlist the primary and secondary parameters of Meteorology and explain any one in detail. **04**  
(c) Describe the classification of dispersion of Plume behaviour. **07**
- OR**
- (c) Explain wind rose diagram with example, enlist its application. **07**
- Q.3** (a) Derive the relationship between ppm and  $\mu\text{g}/\text{m}^3$ . **03**  
(b) Discuss lapse rate in detail. **04**  
(c) Explain the Eddy diffusion model. **07**
- OR**
- Q.3** (a) Discuss MMD in detail. **03**  
(b) Explain the term: Urban heat island effect. **04**  
(c) Explain the Gaussian dispersion model. **07**
- Q.4** (a) Write short note on Temperature Inversion. **03**  
(b) Write down the factors affecting meteorological condition. **04**  
(c) Discuss the effects of Sulphur dioxide on human health, materials and vegetation. **07**
- OR**
- Q.4** (a) What is Isokinetic sampling discuss in Detail? **03**  
(b) Write Short Note on High Volume Air Sampler. **04**  
(c) Discuss the effects of Nitrogen oxides on human health, materials and vegetation. **07**
- Q.5** (a) What is Odour? How it is measured? **03**  
(b) Write a short note: Calculation of effective stack height. **04**  
(c) Enlist the methods of Odour control and explain any two in detail. **07**
- OR**
- Q.5** (a) Write a short note: Sources of Noise. **03**  
(b) Which factors you will consider for controlling industrial noise? **04**  
(c) What are the effects of noise on people, Discuss in detail. **07**

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