

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (Old) EXAMINATION – WINTER 2019

Subject Code: 180608

Date: 29/11/2019

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) Classify air pollutants into different categories indicating their sources. **07**
 (b) Discuss “ London smog episode.” **07**
- Q.2** (a) Explain the following terms with their significance: (1) Effective stack height **07**
 (2) Wind Rose Diagram
 (b) What is global warming? What are the causes of global warming? Discuss its impact **07**
- OR
- (b) Effects of air pollutants on human being. **07**
- Q.3** (a) Calculate effective stack height of a stack for following data: **07**
 Physical height of stack = 120 m
 Inside diameter of stack = 0.90 m
 Wind velocity = 3.60 m/s
 Air temperature = 20 °C
 Barometric pressure = 1000 milibars
 Stack gas velocity = 10 m/s
 Stack gas temperature = 150°C
 (b) Enlist the different meteorological parameters affecting the dispersion of air pollutants in the atmosphere. Explain any two of them in detail. **07**
- OR
- Q.3** (a) Ozone depletion **07**
 (b) Effects of air pollutants on plants **07**
- Q.4** (a) Discuss High Volume Sampler and its use **07**
 (b) Describe fabric bag house filter **07**
- OR
- Q.4** (a) Short note on Gravitational settling chamber **07**
 (b) Which scrubbers are available in market? Describe any two in detail. **07**
- Q.5** (a) Give details about methods of analysis of SO₂ **07**
 (b) What is maximum mixing depth? **07**
- OR
- Q.5** (a) Write short note on “Legislation for control of air pollution and automobile pollution **07**
 (b) Explain green house effect **07**
