

**GUJARAT TECHNOLOGICAL UNIVERSITY**

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

**Subject Code: 2171302**

**Date:10/05/2019**

**Subject Name: Air Pollution Control and Management**

**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) Explain various particulate matter removal mechanisms. **03**  
 (b) Enlist various types of particulate matter control equipment's & name the control equipment having highest particulate matter removal efficiency. **04**  
 (c) Define AQI & explain the benefits of AQI. **07**
- Q.2** (a) Define the following terms : **03**  
 1. Lean Mixture 2. Rich Mixture 3. A/F  
 (b) Draw cyclone separator & label each components of it. **04**  
 (c) Compare two stroke & four stroke engine. **07**
- OR**
- (c) Identify sources of vehicular emission & explain any two in details. **07**
- Q.3** (a) Explain the sources of sulfur dioxide emission. **03**  
 (b) Give the classification of nitrogen oxide control method. **04**  
 (c) Write a short note on ambient air quality standard. **07**
- OR**
- Q.3** (a) Enlist applications of Electrostatic precipitator. **03**  
 (b) Give the classification of sulfur dioxide control techniques. **04**  
 (c) Explain the working of Bag filter with neat sketch. **07**
- Q.4** (a) Explain how photochemical smog formed? **03**  
 (b) Name the sources of air pollution from cement industry. **04**  
 (c) Explain advantages & disadvantages of gravity settling chamber. **07**
- OR**
- Q.4** (a) Enlist various techniques for VOC control. **03**  
 (b) Identify sources of air pollution from thermal power plant. **04**  
 (c) Enlist & explain factors affecting efficiency of cyclone separator. **07**
- Q.5** (a) Enlist the various methods for control of automobile air pollution. **03**  
 (b) Discuss advantages & disadvantages of venturi scrubber. **04**  
 (c) Differentiate between single & double alkali scrubbing. **07**
- OR**
- Q.5** (a) Name the gases emitted from petrol , diesel & CNG driven vehicle. **03**  
 (b) Explain the working principle of venturi scrubber. **04**  
 (c) Write a short note on selective catalytic reduction with its reaction chemistry. **07**

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