

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – SUMMER 2022****Subject Code:3161308****Date:08/06/2022****Subject Name:Air Pollution Control and Management****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.
4. Simple and non-programmable scientific calculators are allowed

- Q.1** (a) Write a short note on Turbo jet Engine. **03**
 (b) Draw a neat sketch of Bag Filter. **04**
 (c) Explain Working principle of Cyclone Separator. **07**
- Q.2** (a) Enlist Selection criteria of Air Pollution Control Equipments. **03**
 (b) Define following terms (along with sketch). **04**
 1. Impaction
 2. Interception
 3. Diffusion
 4. Impingement
 (c) Write a short note on venturi scrubber along with sketch. **07**
- OR**
- (c) Briefly explain the working principle of gravity settling chamber along with sketch. **07**
- Q.3** (a) Briefly explain avalanche multiplication gas molecule in terms of ESP. **03**
 (b) Write a short note on filtration process of Bag filter. **04**
 (c) Enlist and explain the Advantages and Disadvantages of ESP. **07**
- OR**
- Q.3** (a) Note down Reaction chemistry of Limestone Scrubbing. **03**
 (b) Classify NO_x control methods. **04**
 (c) Describe Wellman Lord process along with neat sketch. **07**
- Q.4** (a) Enlist the advantages of Bag filter. **03**
 (b) Draw a neat sketch of ESP. **04**
 (c) Draw Air pollution control scheme for Cement and also mentioned sources and types of air pollutants. **07**
- OR**
- Q.4** (a) Explain Alternative Fuels & their utilization. **03**
 (b) How to improve efficiency of Cyclone Separator? **04**
 (c) Draw Air pollution control scheme for Thermal Power plants and also mentioned sources and types of air pollutants. **07**
- Q.5** (a) Write and explain three forms of NO_x. **03**
 (b) Discuss A/F ratio. **04**
 (c) Write a short note on Bag filter cleaning mechanisms. **07**
- OR**
- Q.5** (a) Enlist and explain industrial applications of ESP. **03**
 (b) Draw a Air pollution Control Scheme for Ceramic Industry. **04**
 (c) Briefly explain the construction of Cyclone Separator. **07**
