

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3161308****Date:16-12-2022****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.
4. Simple and non-programmable scientific calculators are allowed

- Q.1** (a) Give your comments on Effect of Fuel on emission of pollutant. **03**
(b) Draw a neat sketch of Cyclone Separator. **04**
(c) Explain Working principle of Bag filter. **07**

- Q.2** (a) Enlist Selection criteria of Air Pollution Control Equipments. **03**
(b) Enlist and explain the Advantages of ESP. **04**
(c) Write a short note on scrubber along with sketch. **07**

OR

- (c) Briefly explain the working principle of gravity settling chamber along with sketch. **07**

- Q.3** (a) Differentiate between four stroke and two stroke engine. **03**
(b) Explain Alternative Fuels & their utilization. **04**
(c) Write a short note on A/F ratio. **07**

OR

- Q.3** (a) Draw a neat sketch of stratified charge engine. **03**
(b) Highlight the importance of rotary combustion engine. **04**
(c) How engine design changes affect the auto exhaust emission? **07**

- Q.4** (a) Discuss desulphurization process of coal. **03**
(b) Draw a neat sketch of Double alkali scrubbing **04**
(c) Discuss combustion control methods for NOx. **07**

OR

- Q.4** (a) Enlist the sources of VOCs. **03**
(b) Write the control methods of VOCs. **04**
(c) Write a short note on single alkali scrubbing. **07**

- Q.5** (a) Draw neat sketch of cyclone in series and scrubber in series. **03**
(b) Enlist and explain industrial applications of ESP. **04**
(c) Draw Air pollution control scheme for foundry and also mentioned sources and types of air pollutants. **07**

OR

- Q.5** (a) Explain advantages of cyclone in series and scrubber in series. **03**
(b) Enlist advantages and disadvantages of venturi scrubber. **04**
(c) Draw Air pollution control scheme for Cement and also mentioned sources and types of air pollutants. **07**
