

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – SUMMER • 2015

Subject Code: 153504**Date: 11/5/2015****Subject Name: Air Pollution Control****Time: 02.30pm-05.00pm****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) What do you understand by ELR and ALR? Why atmospheric stability is a major concern for pollutant dispersion? How ELR and DALR can be related to atmospheric stability. **07**
- (b) What are the major air Pollutants for coal based thermal power plant? Write about control measures, which can be taken for these pollutants. **07**
- Q.2** (a) Describe the principle of working in fabric filter with the help of suitable diagram? **07**
- (b) What do you understand by noise? How it can be measured? What are the health impacts of noise? **07**
- OR**
- (b) Differentiate the principle of absorption and adsorption? How these mechanisms contribute in air pollution control? **07**
- Q.3** (a) Discuss Air (Prevention and Control of Pollution) Act, 1981 in brief. **07**
- (b) What do you understand by dry adiabatic lapse rate? Derive an expression for DALR. What will happen if the moisture is present in the atmosphere? **07**
- OR**
- Q.3** (a) What do you understand by air quality modeling? Give a brief classification of various kinds of models. **07**
- (b) Explain the topographical effect on pollutant dispersion with the help of suitable examples. **07**
- Q.4** (a) What are the powers given to pollution control boards under “The air (prevention and control of pollution) act, 1981”? **07**
- (b) Write a note on “Bhopal Gas Tragedy” from environmental prospects. **07**
- OR**
- Q.4** (a) Discuss Photochemical Smog and give its various health effects. **07**
- (b) What do you understand by Green house effect, Global warming and Acid rain? **07**
- Q.5** (a) Why Particulate matter (PM) is a major concern for human health? What are the impacts of various air pollutants on vegetation? **07**
- (b) Discuss the major air pollutants emerging from fertilizer industry and pesticides industry. **07**
- OR**
- Q.5** (a) Define following terms: **07**
- MMD and VC
 - Plume rise and Effective slack height
- (b) Describe the working of Cyclone separator with the help of suitable diagram. **07**
