

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. Sem-VI Examination May 2011

Subject code: 160504

Subject Name: Pollution Control & Safety Management

Date: 21/05/2011

Time: 10.30 am – 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.

- Q.1 (a)** Answer the following questions: **07**
1. What is Biosphere?
 2. Define Air Pollution.
 3. Enlist different ways of pollution prevention.
 4. Write the full form of EIA, EMS, NGO, EIS.
 5. Define worker and factory as per the Factories Act.
 6. What are the different types of hazards in process industries?
 7. Write down the aim of Industrial Electricity Act.
- (b)** Attempt all.
1. Explain various effects of air pollutants on vegetables and human being in brief. **04**
 2. Define safety, risk and accident. **03**
- Q.2 (a)** Attempt all **07**
1. Mention the different personal protective equipments used in Industries with their uses.
 2. Explain all the sides of fire triangle with examples.
- (b)** Explain carbon cycle in nature with neat diagram **07**
- OR**
- (b)** What are the various types of solid waste? Explain landfill method for solid waste disposal in brief with schematic diagram. **07**
- Q.3 (a)** Answer the following: **07**
1. Explain the steps of environmental audit in brief.
 2. Write the water, air and environmental protection act and rules with abatement.
- (b)** What are the different methods used to control the water pollutants? Explain any one in detail. **07**
- OR**
- Q.3 (a)** Explain the following terms as per Industrial Dispute Act: **07**
1. Wages 2. Industry 3. Employer 4. Average pay
- (b)** Mention the different sources and causes of environmental pollution. Explain the role of Government in environmental protection in brief. **07**
- Q.4 (a)** What are the techniques for hazard identification? Explain HAZOP method in detail. **07**
- (b)** Mention the different methods for risk prediction. Explain any one in detail. **07**

OR

- Q.4** (a) What are the different ingredients of safety program to enhance the safety in process industries? Mention steps of safety audit. **07**
- (b) Enlist the various types of dispersion models for toxic/flammable materials in to atmosphere. Write mathematical model for any one of them with its limitations. **07**

- Q.5** (a) Show the detail calculation of blast damage due to over pressures. **07**
- (b) Give detail classification of fire and explosions with examples. Enlist the different measures for prevention of fire and explosions. **07**

OR

- Q.5** (a) What are the different pressure relief devices? Explain any two with neat sketch. **07**
- (b) Write short note on emergency control system and disaster planning. **07**
