

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 160504****Date: 29-05-2013****Subject Name: Pollution Control and Safety Management****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) List the various cycles prevailing in the Nature. Discuss on any one in detail. **07**

(b) 1. Define safety, risk and accident. **03**

2. Explain the following terms as per Industrial Dispute Act: **04**
a) Wages b) Industry c) Employer

Q.2 (a) What are the different methods used to control the water pollutants? Explain any one in detail. **07**

(b) Explain ecology and how do human intervention affect on ecology alteration. **07**

OR

(b) Discuss the evolution of Safety science from 3-M theory to Modern concept of Loss Prevention. **07**

Q.3 (a) Write in detail about different parameters used to develop Environment Impact Assessment (EIA). **07**

(b) Which are the different types of Safety Permit? Discuss on the content and validity of Safety Permit? **07**

OR

Q.3 (a) Explain HAZOP technique with emphasis on guidewords, parameters and possible results. **07**

(b) Give a brief account of hazardous waste disposal. **07**

Q.4 (a) Write brief note on wages and payment acts. **07**

(b) What is Fire Triangle? Why is its knowledge useful in chemical process industry? Discuss with emphasis on various methods of inerting? **07**

OR

Q.4 (a) Write a brief note on onsite Emergency Control and Disaster management? **07**

(b) Write a brief note on Landfill sites and Material safety Data sheet (MSDS). **07**

Q.5 (a) List the various types of dispersion models used for toxic/flammable materials released into atmosphere and derive the mathematical model for any one of them with its limitations **07**

(b) Mention the different methods for risk prediction. Explain any one in detail. **07**

OR

Q.5 (a) Explain the main features of factory act. **07**

(b) Discuss the safety considerations to be taken while designing storage tank for explosive and volatile material. **07**
