

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014****Subject Code: 160504****Date: 28-05-2014****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)** Explain Nitrogen cycle in detail **07**
- (b)** Write brief note on effect of pollution. **07**
- Q.2 (a)** Differentiate HAZOP, SAFETY AUDIT and WHAT IF analysis techniques based on suitability to different phases of projects, amount of time, money and resources required. **07**
- (b)** Give a brief account of hazardous waste disposal. **07**
- [OR]**
- (b)** Explain how is fault tree analysis carried out? **07**
- Q.3 (a)** List the various types of fire and explain the components of fire triangle. **07**
- (b)** List the different parameters used to develop Environment Impact Assessment (EIA) and explain any two of them **07**
- [OR]**
- Q.3 (a)** Explain various four personal protective equipments with its working principle and application. **07**
- (b)** What is Energy audit? Why is it important in industry? **07**
- Q.4 (a)** Explain working principle, science and industrial application of Pressure Safety Valve and Rupture disc. **07**
- (b)** Show the detail calculation of blast damage due to over pressures. **07**
- [OR]**
- Q.4 (a)** Explain the role of Government on steps taken for environmental protection in brief. **07**
- (b)** Explain any one method for solid waste disposal in brief with schematic diagram **07**
- Q.5 (a)** Write a brief note on Onsite emergency Control and Offsite disaster management? **07**
- (b)** Write brief note on wages and payment acts. **07**
- [OR]**
- Q.5 (a)** What are the different components of safety program to enhance the safety in process industries? Mention steps of safety audit. **07**
- (b)** Compare the applicability, characteristics and parameters of 'Plum' v/s. 'Puff' model of dispersion. **07**