

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering Sem. - IV - Examination – June- 2011****Subject code:340502****Subject Name : Safety and Hazard Management in Chemical Industries.****Date:04/06/2011****Time: 02:30 pm – 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. English version is Authentic

- Q.1** (a) Explain the importance of safety in chemical industry. **07**
(b) Write short note on. Identification of Hazards and causes of Hazards. **07**

- Q.2** (a) Brief note on: Notified dangerous occupation and occupational diseases. **07**
(b) Explain the importance of a good industrial plant lay out in promoting safe working. **07**

OR

- (b) Write a brief note: Personal protective devices. **07**

- Q.3** (a) Explain Fire triangle and give classification of different types of fire. **07**
(b) Discuss in brief Color codes and symbol for safety in chemical industry. **07**

OR

- Q.3** (a) Write a brief note on : Chemical as a cause of occupational disease. **07**
(b) Define Safety standard and code. Give full name of OSHA, NIOSH, ANSI and NFPA. **07**

- Q.4** (a) What is ISO ?Explain ISO-9001,ISO-14001,& OHSAS- 18001 **07**
(b) Define Hazard and Hazard analysis. Describe PHA in brief. **07**

OR

- Q. 4** (a) List out different methods of detail hazard analysis. Write about FMEA or HAZOP study. **07**
(b) Mention the sources of mechanical & electrical hazards .Also state the general precaution to these hazards. **07**

- Q.5** (a) Write about Transportation of hazardous chemicals. **07**
(b) Chemical burns and their effect. **07**

OR

- Q.5** (a) State any three hazardous chemicals. And their important characteristic. Write about safe storage of ammonia or sulphuric acid. **07**
(b) State different types of fire extinguishers. Discuss any one. **07**
