

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI • EXAMINATION – WINTER • 2014

Subject Code: 160504

Date: 05-12-2014

Subject Name: Pollution Control and Safety Management

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.

- Q.1 (a) Describe the information listed in MSDS and explain its utility in plant safety and environment protection? 07
- (b) (i) Write a note on detonation and deflagration. 04
- (ii) Write a note on sprinkler systems. 03
- Q.2 (a) What are the modes of entry of toxic chemicals into human body and Ways of preventing each of them? 07
- (b) What is fire triangle and explosion? Describe properly and separately? 07
- OR**
- (b) Give different methods used for accident and loss measurement? Explain each in short. 07
- Q.3 (a) Give the different personal protective equipments used in chemical industries? And give the uses of each. 07
- (b) Give and explain the different ingredients of safety program to enhance the safety in the process industries? 07
- OR**
- Q.3 (a) Explain the working principle and industrial application of pressure safety valve and rupture disc with suitable diagram. 07
- (b) Explain in brief fault tree and event tree analysis for risk assessment. 07
- Q.4 (a) Discuss various equipments used to separate the particulate matters from the effluent gases to avoid air pollution. 07
- (b) Discuss the safety considerations to be taken while designing storage tank for explosive and volatile material. 07
- OR**
- Q.4 (a) Discuss disposal of solid waste from chemical process industries. 07
- (b) Write notes on following:
- (i) Main features of water pollution control law 04
- (ii) Main features of factory act 03
- Q.5 (a) Give and explain the different sources and causes of environmental pollution? Explain its effects on human health? 07
- (b) Explain in brief environment audit and energy audit. 07
- OR**
- Q.5 (a) Discuss carbon cycle in nature with neat diagram and give its effect on environment. 07
- (b) What is Environment Impact Assessment (EIA)? Give and explain the factors to be considered while doing EIA? 07
