

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018**

**Subject Code:2160504**

**Date:03/05/2018**

**Subject Name:Pollution Control, Safety & Health Management**

**Time:10:30 AM to 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) 1. Define Explosion. **03**  
2. Define the term Power.  
3. Define Hazard.
- (b) 1. What is the difference between lock – out and strike? **04**  
2. Differentiate between Child and Adult.
- (c) Discuss the role of government and voluntary organizations in controlling pollution to protect the environment. **07**
- Q.2** (a) State different type of Explosion. Explain any one. **03**  
(b) List out various natural cycles in environment. Explain any one in brief. **04**  
(c) State the techniques for hazard identification. Explain Hazard and operability (HAZOP) method in detail. **07**
- OR**
- (c) Explain following instruments for safety with neat sketch **07**  
1. Pressure safety valve  
2. Rupture disc.
- Q.3** (a) “Factory act helps productivity” Evaluate the statement with respect to relevant provisions of factories act, 1948 **03**  
(b) Discuss about failure mode analysis. **04**  
(c) Explain the different sources and causes of environmental pollution. Explain the effect of pollution and its impact on environment. **07**
- OR**
- Q.3** (a) Discuss about WHAT IF analysis. **03**  
(b) Write brief note on wages and payment act. **04**  
(c) Explain various effects of air pollutants on vegetables and human being in brief. **07**
- Q.4** (a) Discuss about waste disposal. **03**  
(b) Briefly Explain energy audit. **04**  
(c) Explain different type of plume and puff models of dispersion. **07**
- OR**
- Q.4** (a) What is Environment audit? Justify the need of environment audit. **03**  
(b) List out the various types of environmental pollution. **04**
- (c) Explain in detail about onsite emergency control and offsite disaster management. **07**

- Q.5** (a) Explain in brief Event Tree analysis for risk assessment. **03**  
(b) Explain safety audit and its significance. **04**  
(c) Discuss in detail about personal protective equipments used in chemical industries. **07**

**OR**

- Q.5** (a) List out various types of fire. Explain Fire triangle. **03**  
(b) Briefly explain about blast damage due to over pressure. **04**  
(c) Give and Explain the different ingredients of safety program to enhance the safety in the process industries. **07**

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