

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code:2160504****Date:27/01/2021****Subject Name:Pollution Control, Safety & Health Management****Time:02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) List various cycle present in the Nature. Discuss any one in detail. **03**  
(b) What is Safety audit? Who performs the safety audit? **04**  
(c) Give and explain the different sources and causes of environmental pollution? Explain its effects on human health? **07**
- Q.2** (a) Discuss any one equipment used for control of air pollution. **03**  
(b) Write short note on IBR Act. **04**  
(c) What is Fire Triangle? Discuss Inerting as a method of preventing Fire. **07**
- Q.3** (a) What is Energy audit? Why is it important in industry? **03**  
(b) Write: (i) Main features of water pollution control law and (ii) Main features of factory act **04**  
(c) What are the different pressure relief devices? Explain any two with neat sketch. **07**
- Q.4** (a) Define safety, risk and accident. **03**  
(b) Discuss emergency planning for Chemical Process Industry. **04**  
(c) Enlist various solid disposal methods and explain any one. **07**
- Q.5** (a) Explain effects of air pollution on plants and materials. **03**  
(b) Discuss different types of Safety Permit. Discuss its content and validity. **04**  
(c) Discuss Off –site and On-site emergency planning? **07**
- Q.6** (a) Write a note on detonation and deflagration. **03**  
(b) Compare the characteristics and parameters of ‘Plum’ v/s. ‘Puff’ model of dispersion. **04**  
(c) What are different types of waste water treatments used to control the water pollution? **07**
- Q.7** (a) Explain whatif and check list method for hazard analysis. **03**  
(b) Short note on i) Land fill sites (ii) Material safety Data sheet(MSDS) **04**  
(c) Explain working principle, science and industrial application of Pressure Safety Valve and Rupture disc. **07**
- Q.8** (a) Write short note on wages and payment Act. **03**  
(b) Explain in brief fault tree Analysis method for hazard analysis. **04**  
(c) Give the different personal protective equipments used in chemical industries? and give the uses/importance of each. **07**

\*\*\*\*\*