

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.

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| 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 |
