

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2160504****Date:27/11/2018****Subject Name:Pollution Control, Safety & Health Management****Time: 02:30 PM TO 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.

		MARKS
Q.1	(a) Describe the Environment and ecosystem with example.	03
	(b) Discuss Hydrological cycle in detail.	04
	(c) Write short note on 'Environmental Audit'.	07
Q.2	(a) Explain primary treatment for waste water in brief.	03
	(b) Write a brief note on wages and payment Acts.	04
	(c) State the types of air pollutants. Briefly explain the important methods used for controlling air pollution caused by industries.	07
OR		
	(c) Write in brief about the environmental impact of Hydro – electric energy.	07
Q.3	(a) Give classification of Solid waste materials.	03
	(b) What is Environmental Impact Statement (EIS)?	04
	(c) Discuss 'Landfill method' for hazardous solid waste disposal.	07
OR		
Q.3	(a) Write names of various renewable energy resources.	03
	(b) Discuss features of good housekeeping.	04
	(c) Explain in brief about Fault tree and Event tree analysis for risk assessment.	07
Q.4	(a) State various types of explosions.	03
	(b) Explain rupture disk and interlock in brief.	04
	(c) Discuss hazard and operability (HAZOP) studies used to identify hazards in chemical industries.	07
OR		
Q.4	(a) Why energy audit is required in industry?	03
	(b) Explain briefly about on-site emergency control and off-site disaster management.	04
	(c) State different types of pressure relief devices. With neat sketches, explain any two of them in detail.	07
Q.5	(a) Explain fire triangle in detail.	03
	(b) Define the following: i) Flash point ii) BLEVE iii) Upper Flammability limit iv) Hazard	04
	(c) Briefly describe the steps for safety audit.	07
OR		
Q.5	(a) Which are the basic ingredients of successful safety program?	03
	(b) Brief about Mathematical Models for prediction of dispersion patterns for toxic/flammable materials released into atmosphere.	04
	(c) Write a short note on various chemical hazard symbols.	07
