

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2023****Subject Code:3140509****Date:11-01-2024****Subject Name:Pollution control & safety 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.
4. Simple and non-programmable scientific calculators are allowed.

		Marks
Q.1	(a) What are the sources of solid waste? Write its classification.	03
	(b) Write short note on control of water pollution.	04
	(c) Explain the types of environmental pollution through chemical industry.	07
Q.2	(a) Explain fire triangle in detail.	03
	(b) Write short note on environmental audit.	04
	(c) List the techniques for hazard identification? Explain HAZOP method in detail.	07
	OR	
	(c) State the various natural cycles in nature and discuss any one in detail.	07
Q.3	(a) Explain Material Safety Data Sheet (MSDS).	03
	(b) What is Energy audit? Why is it important?	04
	(c) Explain with neat sketch the design steps of Gravity Settling chambers.	07
	OR	
Q.3	(a) What is DOW Index? Give its importance in chemical industries.	03
	(b) Explain working principle and industrial applications of Rupture disc.	04
	(c) Discuss Off –site and On-site emergency planning with its importance.	07
Q.4	(a) Define various concentration scales for gaseous pollutants.	03
	(b) State and explain the factors to be considered while doing Environment Impact Assessment(EIA).	04
	(c) State the types of wet scrubber for particulate removal. Discuss any one in brief with neat sketch.	07
	OR	
Q.4	(a) Write a note on detonation and deflagration.	03
	(b) What are the Barriers and Drivers in cleaner production?	04
	(c) Explain rules and regulations for environmental protection and control.	07
Q.5	(a) Explain BLEVE.	03
	(b) What is the aim of payment and wages act? Explain how it safeguards the interest of the workers.	04
	(c) State the various pressure relief devices. Explain any two with neat sketch.	07
	OR	
Q.5	(a) Explain UVCE.	03
	(b) Explain principle of green chemistry and atom economy.	04
	(c) Explain six step methodology of CP.	07
