


Name: Enrolment No:			
<p style="text-align: center;">UPES End Semester Examination, May 2025</p> <p> Course: Chemical Safety in Industries Program: BSc (H) Chemistry Course Code: CHEM4033P </p> <p style="text-align: right;"> Semester: VIII Time : 03 hrs. Max. Marks: 100 </p> <p>Instructions:</p> <p> (i) Scientific calculator is allowed. (ii) Read all questions carefully. (iii) In section B, Q 9 has internal choice. (iv) In section C, Q 11 has internal choice. </p>			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Define chemical accident. Give two examples.	4	CO1
Q 2	List four sources of chemical hazards.	4	CO1
Q 3	Why is chemical safety training important?	4	CO1
Q 4	What are the recommended practices for safety and health programs?	4	CO2
Q 5	Enlist the considerations that must be followed while using a fume hood.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Analyze Seveso disaster of 1976.	10	CO3
Q 7	Describe a biosafety cabinet. Discuss the training necessary to use it.	10	CO2
Q 8	Recall OSHA's Occupational Exposure to Hazardous Chemicals in Laboratories standard (29 CFR 1910.1450).	10	CO2
Q 9	Examine how disaster can impact (A) environment, (B) livelihood, (C) infrastructure & properties, and (D) economy. <p style="text-align: center;">OR</p> Following factors are considered vulnerable to disaster: (A) Economy (B) Environment Provide your insights.	2.5 × 4 OR 5 × 2	CO2

SECTION-C (2Qx20M=40 Marks)			
Q 10	Detail the two most common ways to study dose response relationship.	20	CO1
Q 11	<p>From a Process Safety point of view for International Association of oil and gas Producers, why is it important to (A) apply procedure, and (B) stay within operation limits.</p> <p style="text-align: center;">OR</p> <p>How can you implement the Process Safety Fundamentals?</p>	<p>10 + 10</p> <p style="text-align: center;">OR</p> <p>20</p>	CO3