

Reg. No.



MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

VII SEMESTER B.TECH. (CHEM.ENG)
MAKE UP EXAMINATIONS, JAN 2024

SUBJECT: Risk and safety Management in Process Industries
[CHE 4071]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

1A.	Discuss about the stakeholders who might have an interest in being aware of hazards in a workplace and how to prevent them.	4
1B.	Describe the risk evaluation process with the help of a graph.	3
1C.	How is Preliminary hazard analysis carried out?	3
2A.	System safety- compilation of engineering analysis and management practices that control dangerous situations. Discuss	3
2B.	Explain the four legs of a fire tetrahedron.	3
2C.	What rights does OSHA confer to employers	4
3A.	Describe the Hazop characteristic elements.	3
3B.	Explain the "situational characteristics" of Performance Shaping factors.	4
3C.	Explain "What if" analysis. Mention the areas where it can be applied.	3
4A.	Explain the different classes of fire and the type of extinguishers used.	4
4B.	List the points to be considered to keep a boiler room free from hazard	3
4C.	What is meant by "hold-off" system. What does it consist of?	3
5A.	Explain the importance of duration and frequency of exposure of human beings to a certain chemical.	3
5B.	List the considerations to be looked at during designing a building to protect against fire	3
5C.	Describe the Bhopal disaster and identify the Hazard causal factors of the disaster	4