**ST JOSEPH’S UNIVERSITY, BENGALURU - 27**

Registration Number:

Date & session:

**M.Sc. ENVIRONMENTAL SCIENCE AND SUSTAINABILITY – III SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2023**

**(Examination conducted in November/December 2023)**

**ES 9423 – SAFETY HEALTH AND ENVIRONMENT**

**(For current batch students only)**

**Time: 2 Hours Max Marks: 50**

**This paper contains ONE printed page and THREE parts**

***Instruction: Draw diagrams wherever necessary***

**PART – A**

**Answer any FIVE of the following 5q X 2m = 10m**

1. Define a hazard.
2. Define an accident.
3. Define the fire triangle.
4. Differentiate between flash point and fire point.
5. Define risk.
6. What is risk analysis?
7. Expand ILO and HAZOP.

**PART – B**

**Write explanatory notes on any FOUR of the following 4q X 5m = 20m**

1. Significance of personal hygiene
2. HIRA process with a flow chart
3. Fault Tree Analysis - methodology
4. Types fire extinguishing agents and their mechanism of action
5. Inspection and maintenance of fire extinguishers
6. ISO standards certification and its advantages
7. Types of work permit

**PART – C**

**Answer ALL the questions 2q X 10m = 20m**

1. Explain the domino theory of accident causation.

**OR**

Explain the practical risk assessment process.

1. Explain the types of personal protection equipment based on hazards.

**OR**

Explain the objectives and the necessity of mock drills.