

(Following Paper ID and Roll No. to be filled in your Answer Books)

**PAPER ID :****Roll No.**

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**B.TECH.**

**Theory Examination (Semester-VIII) 2015-16**  
**INDUSTRIAL SAFETY & HAZARD MANAGEMENT**

**Time: 3 Hours****Max. Marks: 100****SECTION - A**

1. Answer all parts with brief explanation. (10X2=20)

- Auto ignition temperature,
- Flash point (FP),
- Flammability limits,
- Deflagration,
- Detonation.
- Fire triangle,
- Quantitative risk assesment,
- HAZOP study,
- Hazard and risk,
- Industrial hygiene.

**SECTION - B**

2. Attempt any five questions. (5X10=50)

- Write method of identification of hazards and its estimation. explain event tree analysis method.
- Discuss the different statistical methods are available to characterize accident and loss performance.
- What bonding and grounding procedure must be followed to transfer a drum of flammable solvent into a storage tank.?
- What are the use of respirators and ventilation for preventing toxic release hazards?
- Differentiate between noise hazard and pressure hazard giving examples.
- Give examples of situations requiring a combination of spring operated relief series with rupture disc.
- Explain dose versus response curve.
- Explain the following in brief: Set pressure, MAWP.

**SECTION - C**

Attempt any two questions. (2X15=30)

3: Attempt the following.

- What are the toxic substances? How will you measure toxic exposure? Explain their entry routes into human system,
- Discuss disaster planning and management and role of NDRF.

4: Attempt the following.

- Discuss the different type of fire in any process industry. Also write the application of different type of extinguisher for different type of fire.
- Explain the conventional spring devices with their importance and applications. Also discuss different type of relief devices.

5: Attempt the following.

- Write the difference between Occupational safety vs. process safety and between fires and explosions.
- Describe the different type of explosions related to a chemical plant.