

B TECH**(SEM-VIII) THEORY EXAMINATION 2018-19
INDUSTRIAL SAFETY & HAZARD MANAGEMENT****Time: 3 Hours****Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. What do you mean by material safety data sheets ?
 - b. Write difference between fire and explosion.
 - c. Define BLEVE & VCE.
 - d. Write various types of explosion related to any chemical plant.
 - e. Write the importance of knock out drum.
 - f. What do you mean by vibration hazard?
 - g. Write the entry route of toxic in to human body.
 - h. Define the different type of fire.
 - i. Write about OSHA and ISO.
 - j. What do you mean by threshold limit?

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a. What are the toxic substances? How will you measure toxic exposure?
 - b. Define qualitative and quantitative methods of risk assesment. Explain any one example from both methods.
 - c. Explain the following terms: (i) inerting (ii) vacuum purging (iii) pressure purging
 - d. Define the Industrial Hygiene and explain the all phases involved.
 - e. Discuss disaster planning and management and role of NDRF.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write the difference between Occupational safety vs. process safety
 - (b) Discuss the various type of explosion in chemical process.
- 4. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write method of identification of hazards and its estimation. Explain fault tree analysis method.
 - (b) Explain various safety aspects related to site and plant layout.

5. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) What are the use of respirators and ventilation for preventing toxic release hazards?
 - (b) Explain how toxicity is measured ? discuss the methods.
6. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Explain the conventional spring devices with their importance and applications. Also discuss different type of relief devices.
 - (b) Explain the different type of fire extinguisher used in fire fightening.
7. **Attempt any *one* part of the following:** **10 x 1 = 10**
- (a) Write the strategy of emergency preparedness and risk management routine.
 - (b) What bonding and grounding procedure must be followed to transfer a drum of flammable solvent into a storage tank?