

# CBCS SCHEME

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18PC821

**Eighth Semester B.E. Degree Examination, July/August 2022**

## **Risk Assessment and Safety Engineering**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing ONE full question from each module.**

### **Module-1**

- 1 a. Define safety. Name and explain on classification of hazards. (10 Marks)  
b. Write a note on hazards from steam. (10 Marks)

**OR**

- 2 a. What is an example of a hazardous identification system? Explain. (12 Marks)  
b. Write a note on Hazan and Hazop. (08 Marks)

### **Module-2**

- 3 a. Explain briefly on risk ranking. (15 Marks)  
b. Write a note on safety of pumping systems. (05 Marks)

**OR**

- 4 a. Write a note on batch and continuous reactor. (10 Marks)  
b. Explain : i) Distillation process ii) Extraction process. (10 Marks)

### **Module-3**

- 5 a. Explain the main effects of explosion and reason causes of explosions. (15 Marks)  
b. Write a note on flash fire and pool fire. (05 Marks)

**OR**

- 6 a. Explain explosion due to TNT model. (06 Marks)  
b. Explain radiation intensity calculations and its effect on plant, people and property. (14 Marks)

### **Module-4**

- 7 a. Discuss important factors of plant layout as safety aspects. (10 Marks)  
b. Explain safety provisions in the Factor Act 1948. (10 Marks)

**OR**

- 8 a. Discuss on advantages of adopting safety laws. (10 Marks)  
b. List and explain safety measures in handling and storage of chemicals. (10 Marks)

### **Module-5**

- 9 Write a note on :  
a. Risk management  
b. Risk reduction  
c. Risk sharing  
d. Risk retention. (20 Marks)

**OR**

- 10 a. Explain development of the ISO 14000 series. (10 Marks)  
b. Explain the conditions that often require first aid. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.