

Total No. of Questions : 10]

SEAT No. :

P173

[Total No. of Pages : 2

[5871]-694

B.E. (Chemical Engineering)
CHEMICAL PROCESS SAFETY
(2015 Pattern) (Elective - III) (Semester - II)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of calculator is allowed.
- 5) Assume suitable data if necessary.

- Q1)** a) Explain methods to handle toxic substances. [5]
b) Explain Fatal Accident Rate (FAR). [5]

OR

- Q2)** a) With the help of sketch explain dose versus response curves. [5]
b) How toxicants are eliminated from biological organisms? Explain briefly. [5]

- Q3)** a) What are the government regulations pertaining to Industrial Hygiene? Explain in detail. [5]
b) Explain estimation methods for Worker Exposures to Toxic Vapors. [5]

OR

- Q4)** a) What is the role of Material Safety Data Sheets in Industrial Hygiene? [4]
b) Explain Flammability Diagram. How is it used to Avoid Flammable Atmospheres. [6]

- Q5)** a) Explain relief systems, its risks and management. [10]
b) Explain following terms briefly : [7]
i) Flammability limits
ii) Fire point
iii) Dermal absorption
iv) Deflagration
v) Explosion

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OR

- Q6)** a) With the help of diagram, explain the Fire Triangle. [7]
b) List and explain miscellaneous design aspects for Preventing Fires and Explosions. [10]

- Q7)** a) What are the objectives of hazard survey? How these surveys are conducted? [10]
b) Explain the stages in hazards identification and risk assessment procedure. [7]

OR

- Q8)** a) What is fire triangle? Distinguish between Fires and Explosions. [10]
b) Explain in detail about Process hazards Checklists. [7]

- Q9)** a) What is HAZOP? Explain in details. [8]
b) Describe the role of chemical engineers in preventing hazards. [8]

OR

- Q10)** a) What are runaway reactions? Explain with Examples. [8]
b) What is role of computers in Safety Management? [8]

