

22408

11920

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define safety planning for industry.
- (b) List the objectives of safety audit.
- (c) Give the importance of plant maintenance.
- (d) List causes and remedies for toxic hazards in chemical plant.
- (e) List the tools for safety planning.
- (f) Give different types of investigations.
- (g) Give two methods of control of hazard in fertilizer plant.

2. Attempt any THREE of the following :

12

- (a) State importance and objectives of plant safety.
- (b) Explain the procedure of safety audit.
- (c) Describe main features of Factories Act, 1948.
- (d) Explain basic steps necessary for controlling plant hazards.

- 3. Attempt any THREE of the following : 12**
- (a) Describe online maintenance with respect to rotameter.
 - (b) List and explain the types of instrumentation is provided for safe plant operation.
 - (c) Explain the procedure for Accident and Incident Analysis.
 - (d) Describe in brief Fault tree analysis.
- 4. Attempt any THREE of the following : 12**
- (a) Explain the procedure and plans for safe plant operation.
 - (b) Explain event tree analysis.
 - (c) Explain the term “HAZOP” in brief.
 - (d) Describe the effects of Radiation hazards.
 - (e) Explain the procedure for shut down of a plant.
- 5. Attempt any TWO of the following : 12**
- (a) Describe in detail safety organization.
 - (b) How accident reporting and investigation is carried out ?
 - (c) Describe “Bhopal Gas disaster”.
- 6. Attempt any TWO of the following : 12**
- (a) Describe the types of Industrial hazards in brief.
 - (b) Explain predictive maintenance in detail.
 - (c) Describe scheduled maintenance. What are its advantages ?
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