

17558

11819

3 Hours / 100 Marks

Seat No.

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

**Marks**

1. (A) Answer any THREE :

12

- (a) Explain any four safety provisions in a plant to prevent accidents.
- (b) List out the sources of electric shock.
- (c) Draw the diagram of any two non-respiratory personal protective equipment.
- (d) Name any four factors to be considered while selecting the proper respiratory protective device.

(B) Answer any ONE :

6

- (a) Differentiate the classes of explosives.
- (b) Draw neat sketch and explain working of any one type of self contained breathing apparatus.

- 2. Attempt any FOUR :** **16**
- (a) Describe the process for safely storage of sulphuric acid.
  - (b) Give the classification of respiratory protective equipment. Explain the working of canister gas masks.
  - (c) Describe the objectives of safety audit.
  - (d) Explain the construction and working of mass flow bins.
  - (e) Explain the principles by which fire can be extinguished.
- 3. Attempt any FOUR :** **16**
- (a) Explain noise hazards.
  - (b) Draw neat sketch of belt conveyers.
  - (c) Describe the objectives of plant maintenance.
  - (d) What is scheduled maintenance ? Explain in detail.
  - (e) Explain the procedure for start up of plant.
- 4. (A) Attempt any THREE :** **12**
- (a) List out the precautions to be taken while flammable and combustible liquid are stored.
  - (b) Explain the method of underground storage for flammable liquid.
  - (c) Give any eight advantages of preventive maintenance.
  - (d) Explain the construction and working of dry chemical powder type fire extinguisher.
- (B) Answer any ONE :** **6**
- (a) Explain the principles of good material handling.
  - (b) Describe in details six types of records to be examined during safety audit.

**5. Attempt any TWO :****16**

- (a) With a neat sketch, explain the construction and working of CO<sub>2</sub> type fire extinguisher.
- (b) Explain online maintenance of rotameter.
- (c) Differentiate between scheduled maintenance preventive maintenance and predictive maintenance. (Min. 03 Points)

**6. Attempt any TWO :****16**

- (a) With a neat diagram, explain the construction and working of positive pressure pneumatic conveyor.
  - (b) Explain the duties and functions of maintenance department. (any eight points)
  - (c) Explain corrective or breakdown maintenance in detail. Give any four disadvantages of breakdown maintenance.
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