

GUJARAT TECHNOLOGICAL UNIVERSITY**PDDC - SEMESTER-VIII • EXAMINATION – WINTER • 2014****Subject Code: X 81904****Date: 03-12-2014****Subject Name: Industrial Safety and Maintenance Engineering****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Discuss various activities involved during the safety analysis of product. **07**
(b) Explain boiler act, 1923 **07**

- Q.2** (a) Explain in brief different types of safety training programs which can be conducted in the organization. **07**
(b) Explain benefits that can be achieved through sound maintenance system **07**

OR

- (b) What do you know about internal and external accident? Explain minor and major accident in industries. **07**

- Q.3** (a) What is total productive maintenance? Discuss its similarities. **07**
(b) Explain wear debris analysis. **07**

OR

- Q.3** (a) Explain fault tree analysis. **07**
(b) Explain operating parameters based monitoring and leakage based monitoring techniques in maintenance of industrial equipment. **07**

- Q.4** (a) What is economic aspect of maintenance? Explain with neat figure showing all the cost. **07**
(b) What are the causes of equipment breakdown? **07**

OR

- Q.4** (a) Explain MTBS, MTBF, MTTF, MTTR and failure rate. **07**
(b) What are the aims and objectives of industrial legislation? **07**

- Q.5** (a) Write short notes on ESI act and Explosive act. **07**
(b) Describe roll of management and roll of government in industrial safety. **07**

OR

- Q.5** (a) Explain principle and methods of lubrication. **07**
(b) Write short note on personal protective equipment. **07**
