

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. - SEMESTER – VIII EXAMINATION – OCTOBER 2012

Subject Code: 181905**Date: 25/10/2012****Subject Name: Industrial Safety & Maintenance Engineering****Time: 02.30pm - 05.00pm****Total Marks: 70****Instructions:**

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

- Q.1** (a) What is industrial safety? How it is associated with risk? **07**
 (b) Explain roll of management and roll of government in industrial safety. **07**
- Q.2** (a) What do you know about internal and external accident also explain what is major and minor accident in an industry? **07**
 (b) What are the aims and objectives of industrial legislation? **07**
- OR**
- (b) What is boiler act? Can this act is applicable to boiler belonging to or under the control of Army Navy and Air Force? **07**
- Q.3** (a) What is meant by industrial maintenance? What are different activities which come under maintenance? **07**
 (b) Differentiate between Emergency maintenance and Breakdown maintenance. **07**
- OR**
- Q.3** (a) What are basic principles of maintenance planning? **07**
 (b) What is Reliability, Maintainability and Availability? Ideally every company would like to achieve 100 percent reliability but this is seldom possible .Justify this statement. **07**
- Q.4** (a) What are the causes of equipment breakdown? **07**
 (b) What is Total Productive Maintenance (TPM) and discuss it's similarities with TQM? **07**
- OR**
- Q.4** (a) Explain MTBS, MTBF, MTTF, MTTR and failure rate. **07**
Q.4 (b) What is an economics aspect of maintenance? Explain with neat figure. Showing all the costs. **07**
- Q.5** (a) What is fault tree analysis? Apply it for a car accident and suggest detail analysis. **07**
 (b) What are the functions of lubrication? And give the tips on lubrication. **07**
- OR**
- Q.5** (a) What is wear debris analysis? Write the names of any three wear debris analysis techniques commonly used. **07**
 (b) What is thermal monitoring? How temperature sensitive tapes work? **07**
