

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014**

**Subject code: 181905****Date: 25-11-2014****Subject Name: Industrial safety and maintenance engineering****Time: 02:30 PM TO 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) What is condition monitoring? Explain in brief methods for condition monitoring. **07**
- (b) Explain following **07**
- (1) Total productive maintenance
  - (2) Preventive maintenance

- Q.2** (a) Explain maintenance function costs in **07**
- (1) Chemical industry
  - (2) Fertilizer industry.
- (b) What is the importance of lubrication? Explain various methods of lubrication. **07**

**OR**

- (b) Explain fault tree analysis for ceiling fan **07**
- Q.3** (a) Explain in brief **07**
- (1) Boiler act
  - (2) Explosive act
- (b) Explain in brief **07**
- (1) MTBS
  - (2) MTTF
  - (3) MTTR

**OR**

- Q.3** (a) How equipment life cycle is useful for deciding maintenance activities? Explain in detail. **07**
- (b) Explain in brief maintenance economics. **07**
- Q.4** (a) Explain in detail about safety measures in following industries **07**
- (1) Heavy fabrication industry.
  - (2) Chemical industry.
- (b) Explain in brief safety trials. **07**

**OR**

- Q.4** (a) Explain in detail about codes and regulations for workers safety and health. **07**
- (b) Explain in brief **07**
- (1) Workman's compensation act
  - (2) Industrial hygiene

- Q.5** (a) What is industrial safety? How it is associated with risk? **07**

- (b) What is thermal monitoring? How temperature sensitive tapes work? **07**

**OR**

- Q.5** (a) Explain roll of management and roll of government in industrial safety. **07**
- (b) Explain in detail wear debris analysis. **07**

\*\*\*\*\*