

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII (OLD) EXAMINATION – WINTER 2018****Subject Code: 181905****Date: 29/11/2018****Subject Name: Industrial Safety & 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) Describe roll of management and roll of government in Industrial safety. **07**  
 (b) What is Industrial safety? Explain safety and Productivity. **07**
- Q.2** (a) Discuss causes of accidents in industrial plant. **07**  
 (b) State the types of hazards and explain any three in detail with possible causes and remedial actions **07**
- OR**
- (b) What is the importance of lubrication? Explain various methods of lubrication. **07**
- Q.3** (a) Short Note: a) Boiler Act, **07**  
 b) Explosive act  
 (b) Discuss the preventive maintenance and its importance. **07**
- OR**
- Q.3** (a) Importance Total productive maintenance. Discuss in details. **07**  
 (b) Discuss equipment life cycle with bath tub curve **07**
- Q.4** (a) Explain in brief **07**  
 (1) MTBS (2) MTTF (3) MTTR  
 (b) What is personal protective equipment? Explain different PPE used for different purpose and an importance of PPE. **07**
- OR**
- Q.4** (a) What is fault tree analysis and Root cause analysis? Explain in detail. **07**  
 (b) Describe merits and demerits of centralized and decentralized maintenance systems. **07**
- Q.5** (a) What is Condition monitoring? Describe on-load and off load Testing. **07**  
 (b) What is wear debris analysis? Write the names of any three wear debris analysis techniques commonly used. **07**
- OR**
- Q.5** (a) Explain Noise vibration and harshness analysis of machines **07**  
 (b) What is thermal monitoring? Explain in brief about work of temperature sensitive tapes. **07**

\*\*\*\*\*