

GUJARAT TECHNOLOGICAL UNIVERSITY**BE SEMESTER–VIII(OLD) • EXAMINATION – WINTER 2017****Subject Code:181905****Date: 15/11/2017****Subject Name: Industrial Safety and Maintenance Engineering****Time:02.30 PM TO 05.00PM****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) Explain in detail about codes and regulations for workers safety & health. **07**
(b) State the types of hazards and explain any three in detail with possible causes and remedial actions. **07**
- Q.2** (a) What are the aims and objectives of Industrial legislation? Explain in brief. **07**
(b) Describe importance of following in preventive accidents in Industries: Plant layout, Illumination, Ventilation, House keeping **07**
- OR**
- (b) Write short notes on. (1) Explosive Act (2) Factory Act 1948 **07**
(3) Industrial Hygiene.
- Q.3** (a) What are the ways to improve Maintainability of equipment? **07**
(b) What is Fault Tree Analysis? Make a one FTA for a car break not starting going up to at least -up-to two levels and remedial measures. **07**
- OR**
- Q.3** (a) Explain factors that are to be considered for deciding maintenance organization in Industry. **07**
(b) How system approach can be applied to maintenance function? Explain. **07**
- Q.4** (a) Explain the challenges faced by the Maintenance Manager. **07**
(b) What is Reactive Maintenance, Why is it called so and What does it include? **07**
- OR**
- Q.4** (a) Explain Condition Based Maintenance and Risk Based Maintenance in detail. **07**
(b) What is Reliability, Maintainability and Availability? Ideally every company would like to achieve 100 percent reliability but this is seldom possible. Justify. **07**
- Q.5** (a) Explain Economic aspect of maintenance with neat fig. Showing all the cost. **07**
(b) What is wear debris analysis? Write about Spectroscopic oil analysis process and Ferrography analysis process. **07**
- OR**
- Q.5** (a) What is Dynamic Predictive Maintenance? Explain two fundamental principles of it. **07**
(b) List down various causes of vibration in machine and Explain the various transducers are used for vibration measurements. **07**
