

GUJARAT TECHNOLOGICAL UNIVERSITY
BE – SEMESTER – VIII EXAMINATION – WINTER 2016

Subject Code: 181905**Date: 24/10/2016****Subject Name: Industrial Safety & Maintenance Engineering** (Department Elective II)**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) Explain - How plant productivity can be achieved through industrial safety? **07**
 (b) What do you mean by safety? Draw safety committee structure and discuss the major functions and responsibilities of each committee member. **07**
- Q.2** (a) What do you mean by industrial hygiene? Explain general measures which are adopted for the prevention and control of occupational diseases due to chemicals. **07**
 (b) Define training. Discuss the various methods of employee training. Which method of training do you feel the most suitable and why? **07**
- OR**
- (b) What do you mean by accident? Explain various direct and in-direct costs of accident. **07**
- Q.3** (a) Short Note: Boiler Act **07**
 (b) Short Note: Equipment life cycle. **07**
- OR**
- Q.3** (a) Draw a structure of maintenance organization and explain the importance and goal of this organization. **07**
 (b) Explain various costs associated with maintenance. **07**
- Q.4** (a) Give detail Classification of maintenance system and explain unplanned maintenance system in detail. **07**
 (b) What is TPM? Explain methodology and implementation steps for TPM. **07**
- OR**
- Q.4** (a) (i) Explain fault tree analysis with example **04**
 (ii) Short Note: Repair cycle **03**
 (b) Define: Reliability, Maintainability and Availability. Explain the factor that contributes to availability of machine **07**
- Q.5** (a) Short Note: Trend monitoring **07**
 (b) What do you mean by condition monitoring? List out various methods of condition monitoring and explain any one. **07**
- OR**
- Q.5** (a) Short Note: Lubrication system. **07**
 (b) Explain the principle of wear debris analysis. And explain Ferrography method of wear debris analysis. **07**
