

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (old) - EXAMINATION – SUMMER 2018

Subject Code:181905

Date:07/05/2018

Subject Name:Industrial Safety & Maintenance Engineering (Department Elective II)

Time:10:30 AM to 01:00 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 the responsibilities of management in the field of Safety. **07**
(b) Write a short essay on “economical losses due to accidents”. **07**
- Q.2** (a) How do you assess the training needs of the industrial organization? Explain with examples. **07**
(b) Define the Following terms as per Factories Act, 1948. **07**
(i)A factory (ii)Manufacturing Process (iii) Child (iv) Adolescent (v) Adult
(vi)Worker (vii)Hazardous process
- OR**
- (b) Define the following as per stipulated of the Workmen’s compensation Act, 1923. (i)Dependent (ii) Partial disablement (iii) Total disablement **07**
- Q.3** (a) How do you classify fire? What are the measures you suggest to contain fire hazards in buildings? Explain with an example. **07**
(b) Explain the different types of industrial accidents and general steps to be taken for preventing the accidents in any industry. Also explain the procedure for accident reporting. **07**
- OR**
- Q.3** (a) What are seven basic parameters which form basis of Condition Monitoring Techniques in maintenance of industrial equipments? Write briefly on each Technique. **07**
(b) What do you mean by occupational diseases? Discuss occupational diseases caused due to physical condition and respiration in dusty environment. **07**
- Q.4** (a) 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**
(b) What is Total Productive Maintenance (TPM)? How does it differ from Total Quality Management (TQM)? **07**
- OR**
- Q.4** (a) What is FMEA? How does FMEA help maintenance personnel? **07**
(b) Draw chart of System approach of Maintenance Functions **07**
- Q.5** (a) How Equipment Life Cycle is useful for deciding maintenance activities? Draw Bath Tub Curve and show which part is important from maintenance point of view. **07**
(b) Explain Noise vibration and harshness analysis of machines **07**
- OR**
- Q.5** (a) Enumerate three basic approaches for preparation of maintenance budget. **07**
(b) Differentiate between Fixed Costs and Variable Costs associated with Maintenance Function. Give suitable example in each case. **07**
