

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER 2013****Subject Code: 161505****Date: 30-05-2013****Subject Name: Maintenance and Safety Engineering****Time: 10.30 am - 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) What should be the objectives of maintenance department for successful working of a maintenance department ? **07**
(b) How safety engg. is related to design of any equipment ? **07**
- Q.2** (a) Discuss various factors to be considered while deciding the type of maintenance practice to be followed in any organization/department. Explain "Predictive maintenance" **07**
(b) Discuss the methods of detecting wear and tear in reciprocating parts. **07**
OR
(b) What are the causes of accidents in stores ? What safety measures would you recommend in the stores ? **07**
- Q.3** (a) Explain the elements of planned preventive maintenance programme. **07**
(b) Explain with neat sketches maintenance and repair of shafts and spindles. **07**
OR
- Q.3** (a) What is maintainability ? Discuss the need and importance of maintainability. **07**
(b) What is "decision tree" ? Explain fault tracing with the help of it for any specified problem. **07**
- Q.4** (a) Explain the restoration procedure for the following parts : **07**
(i) Gear tooth (ii) Key ways (iii) Joints with broken screws
(b) List various methods of evaluation of equipment replacement proposals and explain any one of them. **07**
OR
- Q.4** (a) Write brief note on Reliability centered maintenance. **07**
Q.4 (b) What is an industrial hazard ? Explain some special hazards. **07**
- Q.5** (a) Discuss safety rules for bench work and machine tool operation. **07**
(b) Discuss the factors contributing to accidents. **07**
OR
- Q.5** (a) Discuss Safety education and training programme and its importance for any organization. **07**
(b) How accidents are recorded and investigated ? **07**
