Seat No.: _____ Enrolment No._____

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 óPredictive maintenanceô.	**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 ódecision treeô ? Explain fault tracing with the help of itfor any specified problem.	**07**
Q.4	**(a)**	Explain the restoration procedure for the following parts : (i)Gear tooth (ii) Key ways (iii) Joints with broken screws	**07**
	(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**

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