Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER–VIII • EXAMINATION – WINTER • 2014

Subject Code: X 81904 **Date: 03-12-2014**

Subject Name: Industrial Safety and Maintenance Engineering

Time: 02:30 pm - 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)**	Discuss various activities involved during the safety analysis of product.	**07**
	(b)	Explain boiler act, 1923	**07**
Q.2	**(a)**	Explain in brief different types of safety training programs which can be conducted in the organization.	**07**
	(b)	Explain benefits that can be achieved through sound maintenance system	**07**
		OR	
	(b)	What do you know about internal and external accident? Explain minor and major accident in industries.	**07**
Q.3	**(a)**	What is total productive maintenance? Discuss its similarities.	**07**
	(b)	Explain wear debris analysis.	**07**
		OR	
Q.3	**(a)**	Explain fault tree analysis.	**07**
	(b)	Explain operating parameters based monitoring and leakage based monitoring techniques in maintenance of industrial equipment.	**07**
Q.4	**(a)**	What is economic aspect of maintenance? Explain with neat figure showing all the cost.	**07**
	(b)	What are the causes of equipment breakdown?	**07**
		OR	
Q.4	**(a)**	Explain MTBS, MTBF, MTTF, MTTR and failure rate.	**07**
	(b)	What are the aims and objectives of industrial legislation?	**07**
Q.5	**(a)**	Write short notes on ESI act and Explosive act.	**07**
	(b)	Describe roll of management and roll of government in industrial safety.	**07**
		OR	
Q.5	**(a)**	Explain principle and methods of lubrication.	**07**
	(b)	Write short note on personal protective equipment.	**07**

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