Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2017

Subject Code: 2161505 **Date: 08/05/2017**

Subject Name: Maintenance & Safety Engg

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.**

			MARKS
Q.1		**Short Questions**	**14**
	1	Define the term 'maintenance'.	
	2	List the primary functions of maintenance department.	
	3	Give the secondary functions of maintenance department.	
	4	Define 'maintainability'.	
	5	Write formula of maintainability index.	
	6	What is Predictive maintenance?	
	7	What is Total productive maintenance (TPM)?	
	8	List the methods of equipment replacement analysis.	
	9	What is 'decision tree' ?	
	10	What do you understand by service life of an equipment?	
	11	What is repair cycle?	
	12	Write safety publicity methods.	
	13	What do you mean by an industrial hazard?	
	14	Name fire extinguisher means used in industries.	
Q.2	**(a)**	What are the causes of accidents in stores?	**03**
	(b)	What are objectives of Maintenance department?	**04**
	(c)	Discuss various factors to be considered while deciding the type of maintenance practice to be followed in any organization/department.	**07**
		OR	
	(c)	Explain the steps of safety procedure.	**07**
Q.3	**(a)**	Discuss about breakdown maintenance.	**03**
	(b)	Explain the concept of 'Condition based maintenance'.	**04**
	(c)	Discuss the important pillars for the successful implementation of TPM programme.	**07**
		OR	
Q.3	**(a)**	Discuss scheduled maintenance.	**03**
	(b)	Explain the concept of 'Reliability centered maintenance'.	**04**
	(c)	Explain the elements of planned preventive maintenance programme.	**07**
Q.4	**(a)**	Discuss the importance of maintainability.	**03**
	(b)	How will you decide about the replacement of an equipment ?	**04**
	(c)	Discuss the assembly and disassembly rules followed in repair procedure.	**07**
		OR	
Q.4	**(a)**	Discuss VEIN analysis in brief.	**03**
	(b)	Discuss MAPI method of replacement analysis.	**04**
	(c)	Discuss the methods of protection of metals and alloys from corrosion.	**07**

Q.5	**(a)**	Discuss safety rules for the foundry work.	**03**
	(b)	How Safety Engg. helps in improving productivity of an organization?	**04**
	(c)	How accidents are recorded and investigated ?	**07**

OR

Q.5	**(a)**	Discuss safety rules for the welding operation.	**03**
	(b)	Write brief note on : Safety education and training programme and its importance.	**04**
	(c)	Discuss the methods for the elimination or control of industrial hazards.	**07**

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