

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY-GURUJADA VIZINAGARAM
III B. Tech I Semester Regular Examinations November -2025
INDUSTRIAL SAFETY

(ME)

Time: 3 hours

Max. Marks: 70

The Question paper consists of Part A & Part B.

Part A is compulsory, Answer all questions. Part B Answers any one question from each unit.

1		PART-A	(20Marks)
	a)	Mention some special provisions give by Factories Act 1948?	[2]
	b)	List the types of Accidents?	[2]
	c)	What are the objectives of the maintenance engineering?	[2]
	d)	Brief on the types of tools used for the maintenance?	[2]
	e)	What is the function of a lubricant in reducing wear?	[2]
	f)	What is the function of a lubricant in reducing wear?	[2]
	g)	Describe the importance of fault tracing?	[2]
	h)	How do you draw a decision tree diagram?	[2]
	i)	What are the merits and demerits of preventive maintenance?	[2]
	j)	What is periodic maintenance?	[2]
		PART-B	(50Marks)
		Question from Unit - I	
2	a)	Explain briefly about fire prevention and fire fighting.	[5]
	b)	What are mechanical hazards? Explain their types and preventive measures.	[5]
		(OR)	
3	a)	What are safety color codes? Explain their significance in industries.	[5]
	b)	Explain the Lockout–Tagout (LOTO) procedure for electrical and mechanical safety.	[5]
		Question from Unit - II	
4	a)	Distinguish between preventive maintenance and predictive maintenance.	[5]
	b)	Write short notes on primary and secondary functions and responsibilities of maintenance department.	[5]
		(OR)	
5	a)	What responsibilities does the maintenance department have in managing spare parts and consumables?	[5]
	b)	Name and describe three types of tools (or instruments) used in maintenance work and their applications.	[5]
		Question from Unit - III	
6	a)	Explain the different types of lubrication systems in detail.	[5]
	b)	A machine component is observed to have increasing wear and signs of corrosion. As a maintenance engineer, propose a strategy covering lubricant selection, lubrication method, preventive measures for corrosion, and an inspection schedule.	[5]

		(OR)	
7	a)	What are the methods for reducing wear in machines? Include how lubricants help and mention any other mechanical or material strategies.	[5]
	b)	Explain at least three types of corrosion .	[5]
		Question from Unit - IV	
8	a)	Describe fault tree analysis.	[5]
	b)	Draw decision tree for following machines . I Any one machine tool Pump II. Air compressor	[5]
		(OR)	
9	a)	Describe what is meant by a decision tree in the context of fault-finding. Why is it needed, and what are its main applications?	[5]
	b)	Explain the concept of fault tracing in maintenance engineering. Discuss its importance with respect to equipment reliability, downtime reduction and maintenance cost control.	[5]
		Question from Unit - V	
10	a)	What are the steps in making preventive maintenance procedure?	[5]
	b)	How do you prepare a program and schedule of preventive maintenance for mechanical and electrical equipment?	[5]
		(OR)	
11	a)	Give Steps for periodic and preventive maintenance of: I. Machine tools II. Pumps	[5]
	b)	Explain the concept and need of periodic inspection. Describe schemes for degreasing, cleaning and repairing of equipment.	[5]
