

Code: 20EE2501A

**III B.Tech - I Semester – Regular / Supplementary Examinations
NOVEMBER 2023**

**ELECTRICAL SAFETY
(Common to ALL Branches)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Explain the principles of electrical safety.	L2	CO1	7 M
	b)	Write the objectives of Electrical safety studies and safety measures.	L2	CO1	7 M
OR					
2	a)	Write a short note on hazards in electricity.	L2	CO1	7 M
	b)	Explain electric shock. Mention the factors influencing its severity.	L4	CO4	7 M
UNIT-II					
3	a)	Demonstrate the safety requirement for agricultural installations.	L3	CO2	7 M
	b)	Illustrate the safety aspects to be taken in house wiring and fittings.	L3	CO2	7 M

OR					
4	a)	Explain in detail the various safety measures adopted in Multistoried buildings.	L3	CO2	7 M
	b)	Explain about the various Do's and Don'ts that influence electrical safety.	L4	CO4	7 M
UNIT-III					
5	a)	Identify the preliminary preparations to be followed for electrical safety during industrial installations.	L3	CO3	7 M
	b)	Explain the procedure for field quality.	L3	CO3	7 M
OR					
6	a)	Identify the significance of risk of plant. Explain about the equipment used in risk plants.	L3	CO3	7 M
	b)	Analyze the various personal safety equipment used while industrial installations were under progress.	L4	CO4	7 M
UNIT-IV					
7	a)	Assess the significance of equipment earthing.	L3	CO2	7 M
	b)	Explain the functional requirements of earthing system.	L3	CO2	7 M
OR					
8	a)	State and explain the personal protective equipment for working over hazards.	L4	CO5	7 M

	b)	Analyze the safety precautions that would be taken while working in hazardous zones in industry.	L4	CO5	7 M
UNIT-V					
9	a)	What are CO ₂ and Halogen gas schemes in safety?	L2	CO1	7 M
	b)	Illustrate the causes for initiation of fires.	L4	CO5	7 M
OR					
10	a)	Analyze various fire extinguishing techniques.	L4	CO5	7 M
	b)	Illustrate the necessity of fire extinguishing system in work area.	L4	CO5	7 M