

Enrollment No./Seat No.:

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Bachelor of Engineering - SEMESTER - V EXAMINATION - WINTER 2025**

**Subject Code: N115AC01**

**Date: 06-12-2025**

**Subject Name: Safety in Construction**

**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.**
- 4. Simple and non-programmable scientific calculators are allowed.**

	<b>Marks</b>
<b>Q.1 (a)</b> Explain the importance of safety management in construction projects.	<b>03</b>
<b>(b)</b> Discuss the human factors influencing accidents on construction sites.	<b>04</b>
<b>(c)</b> Discuss the importance of accident reporting and investigation on site.	<b>07</b>
<b>Q.2 (a)</b> Define “Job-Site Safety Assessment.”	<b>03</b>
<b>(b)</b> Define “Safety Program” and state its essential elements.	<b>04</b>
<b>(c)</b> Describe the procedures for developing an effective construction safety program.	<b>07</b>
<b>OR</b>	
<b>(c)</b> Explain the importance of maintaining safety records on construction sites.	<b>07</b>
<b>Q.3 (a)</b> List types of occupational diseases common in construction workers.	<b>03</b>
<b>(b)</b> Discuss the relationship between safety and productivity in construction projects.	<b>04</b>
<b>(c)</b> Explain safety control measures for handling construction machinery as per IS 7293:1974	<b>07</b>
<b>OR</b>	
<b>(a)</b> State the objectives of the Occupational Health and Safety (OHS) Management System.	<b>03</b>
<b>(b)</b> Discuss the cost of construction injuries and their impact on project progress.	<b>04</b>
<b>(c)</b> Explain the theories of accident causation and their relevance in safety planning.	<b>07</b>
<b>Q.4 (a)</b> Describe the importance of safety communication between various management levels.	<b>03</b>
<b>(b)</b> Explain the roles of first-line supervisors and middle managers in implementing safety measures.	<b>04</b>
<b>(c)</b> Explain the responsibilities of top management in implementing safety procedures.	<b>07</b>
<b>OR</b>	
<b>(a)</b> What is the role of safety personnel on a construction site?	<b>03</b>

- (b)** Discuss the role of supervision and leadership in maintaining safe work practices. **04**
- (c)** Discuss project coordination and safety procedures to be adopted at site level. **07**
- Q.5 (a)** Explain the importance of safety record-keeping in construction projects. **03**
- (b)** Write short notes on: subcontractor obligations **04**
- (c)** Prepare a detailed site safety checklist for excavation and concreting works as per relevant IS codes. **07**

**OR**

- (a)** Define “Safety Audit.” Explain its objectives and frequency at construction sites. **03**
- (b)** Write short notes on: Safety training **04**
- (c)** Discuss a safety plan for working at height as per IS 3696: Part 1 (Scaffolds and Ladders). **07**

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