

Assignments for

Industrial Safety and Standards (BE02000061)

B.E. Semester 2



GOVERNMENT ENGINEERING COLLEGE, BHUJ



Directorate of Technical Education

Gandhinagar, Gujarat

Government Engineering College, Bhuj

Certificate

This is to certify that Mr./Ms. _____
Enrollment No. _____ of B.E. Semester _____ of _____ Engineering
Branch of this Institute (GTU Code: _____) has satisfactorily completed the Practical /
Tutorial work for the subject **Industrial Safety and Standards (BE02000061)** for the
academic year 2025-26.

Place: _____

Date: _____

Name and Sign of Faculty member

Head of the Department

Assignment

Unit: 1 Industrial safety

- 1) Explain the need for safety in modern day industries.
- 2) Explain the relationship between safety and productivity.
- 3) Explain the types of accidents and ways to control them.
- 4) Define industrial safety? Explain the significance of industrial safety?
- 5) Write theories of accident causation.
- 6) Describe salient points of factories act 1948.
- 7) Explain the safety colour codes
- 8) Explain the following terms in relation to monitoring safety performance: Frequency rate, severity rate, incidence & activity rate.
- 9) Write a note on safety policy and safety standards for industry and organisation.

Unit-II: Hazard identification and analysis

- 1) Define hazard and list different types of hazards.
- 2) Classify fire.
- 3) Explain the types of fire extinguishers and their specific applications.
- 4) What is hazard identification risk assessment and control procedure?
- 5) Write a brief note on Fire and explosion risk assessment (FERA).
- 6) Define Hazard and Operability Study (HAZOP). Explain with diagram detail Methodology, Criticality Analysis, Corrective Actions and Follow-up for industrial safety.
- 7) How to control chemical hazards in the workplace. Explain with diagram.
- 8) What is the key information provided in Material Safety Data Sheet (MSDS).

Unit-III: Fundamentals of maintenance engineering

- 1) Define maintenance
- 2) State the aims of maintenance.
- 3) State the Primary and secondary functions of maintenance department.
- 4) What is the function and responsibility of maintenance department?
- 5) List types of maintenance and application of tools used for maintenance
- 6) Explain Maintenance cost & its relation with replacement economy.
- 7) Write a brief note on service life of equipment.

Unit-IV: Wear and Corrosion and their prevention

- 1) Define Wear and explain types of wear.
- 2) What are the causes of wear and its general effects
- 3) Write a brief note on wear reduction methods.
- 4) Define lubricant types and their applications.
- 5) Explain the various lubrication methods with sketches, working and applications.
- 6) Define corrosion. Explain principle and factors affecting corrosion.
- 7) Enlist types of corrosion. Explain in detail the various corrosion prevention methods.

Unit-V: Fault Tracing

- 1) Explain the concept and importance of fault tracing.
- 2) Explain the concept of decision tree in fault tracing, its needs and applications
- 3) State the sequence of fault tracing activities.
- 4) State the types of faults in machine tools and their general causes.

Unit-VI: Periodic and Preventive Maintenance

- 1) Define and explain the following terms
 - a. Periodic inspection
 - b. Degreasing
 - c. Cleaning and repairing
 - d. Overhauling
 - e. Preventive maintenance
- 2) State the steps in overhauling of mechanical components.
- 3) Write a brief note on overhauling of an electrical motor.
- 4) What are common troubles and remedies of electric motor, repair complexities
- 5) Explain the need, steps and advantages of preventive maintenance
- 6) State the steps for periodic maintenance of:
 - (i) Machine tools
 - (ii) Pumps
 - (iii) Air compressors
 - (iv) Diesel generating (DG) sets.
- 7) Program and schedule of preventive maintenance of mechanical and electrical equipment.
- 8) Explain the repair cycle concept and its importance.