

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2022****Subject Code:3172217****Date:05-01-2023****Subject Name:Safety Engineering****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.

	MARKS
Q.1 (a) Discuss the accidents classifications on different bases.	03
(b) Explain the causes behind any accident takes place in mines.	04
(c) Explain the pit safety committee and its function.	07
Q.2 (a) Explain the accident rates for measurements of safety performance.	03
(b) Describe the safety management systems in Indian mining industry.	04
(c) Explain the process of risk management.	07
OR	
(c) Explain assessment and evaluation of training schemes.	07
Q.3 (a) Explain how accident proneness is determined in mining operation.	03
(b) Describe the different steps for creating and maintaining safety awareness.	04
(c) Explain the job safety analysis.	07
OR	
Q.3 (a) Describe the unsafe act of persons and unsafe conditions.	03
(b) Explain the purpose and procedure for investigation of accident.	04
(c) Discuss the functions and features of emergency organization.	07
Q.4 (a) Discuss the accident and incident analysis.	03
(b) Describe the accident prevention and corrective action.	04
(c) Explain the structure of the report of inquiry into an accident.	07
OR	
Q.4 (a) Discuss the measurement of safety efficiency.	03
(b) Explain the constitution of safety committees.	04
(c) Discuss the steps taken for the development of safe behavior in Indian mines.	07
Q.5 (a) Differentiate between hazards and risks.	03
(b) Describe the risk components and its types.	04
(c) Explain the hazards identification and risk assessment.	07
OR	
Q.5 (a) Discuss the different techniques of training.	03
(b) Describe the different aids for the motivation of workers.	04
(c) Explain the procedure for maintaining training records and reports.	07
