

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE – SEMESTER- VII EXAMINATION-SUMMER 2023****Subject Code: 3172217****Date: 28/06/2023****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**

<b>Q.1</b>	(a) State the causes behind any accident that take place in mines.	<b>03</b>
	(b) Explain the accident rates for measurements of safety performance.	<b>04</b>
	(c) Explain the different techniques for training.	<b>07</b>
<b>Q.2</b>	(a) Describe Accident costs, safety policy and program in mines.	<b>03</b>
	(b) Discuss the unsafe conditions and unsafe acts.	<b>04</b>
	(c) Explain the development of industrial safety in mining operation.	<b>07</b>
<b>OR</b>		
	(c) Discuss the functions and features of emergency organization.	<b>07</b>
<b>Q.3</b>	(a) Explain accident proneness and age experience.	<b>03</b>
	(b) Explain classification of accident in mines.	<b>04</b>
	(c) Describe the purpose and procedure of investigation.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Explain physical fitness and effect of environment in mining.	<b>03</b>
	(b) Discuss the safety standards, accident compensation and insurance policy applicable in mining industry.	<b>04</b>
	(c) Explain the structure of the report of inquiry into an accident.	<b>07</b>
<b>Q.4</b>	(a) Explain accident record and statistical analysis of mine accidents.	<b>03</b>
	(b) Explain accident record and statistical analysis of mine accidents.	<b>04</b>
	(c) Explain the role of different kind of personal protective equipment used in mining.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Discuss the functions of safety organization.	<b>03</b>
	(b) Describe the role of workmen's inspector and safety officer.	<b>04</b>
	(c) Explain the pit safety committee and its function.	<b>07</b>
<b>Q.5</b>	(a) Explain the publicity and propaganda for safety.	<b>03</b>
	(b) State the various safety instructions during working in mining.	<b>04</b>
	(c) Explain assessment and evaluation of training schemes.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	(a) Explain the functions of job safety analysis.	<b>03</b>
	(b) Discuss the different aids for the motivation of workers.	<b>04</b>
	(c) State the procedure for maintaining training records and reports.	<b>07</b>

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