

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI EXAMINATION – SUMMER 2025

Subject Code: 3162204

Date: 28-05-2025

Subject Name: Mine Hazards

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) Write causes of mine fires.	03
	(b) Explain stages of spontaneous combustion.	04
	(c) Explain detection and prevention of spontaneous heating.	07
Q.2	(a) List out the various types of fire extinguishers.	03
	(b) Explain coward's diagram with sketch.	04
	(c) Explain the methods of sealing off the fire in underground mines.	07
	OR	
	(c) Explain any one fire extinguisher with neat sketch.	07
Q.3	(a) Write causes of fire damp explosion.	03
	(b) Define fire damp and coal dust explosion.	04
	(c) Define stone dust barrier and explain its types with neat sketch.	07
	OR	
Q.3	(a) Explain prevention of coal dust explosion.	03
	(b) Define inundation and its causes.	04
	(c) Explain self-rescuer with neat sketch.	07
Q.4	(a) Write short note on water dam.	03
	(b) Explain Graham's ration with example.	04
	(c) List out various rescue apparatus write its uses.	07
	OR	
Q.4	(a) Explain safety boring apparatus.	03
	(b) Write precaution to be taken when approaching old water bearing working.	04
	(c) State the standard of lighting at various places in mine as per rule.	07
Q.5	(a) List out various types of safety lamp and its uses.	03
	(b) Write short note on rescue room.	04
	(c) Explain measurement and prevention of dust in mine.	07
	OR	
Q.5	(a) Write physiological effects of dust.	03
	(b) Explain construction of cap lamp in brief.	04
	(c) Explain maintenance and examination of safety lamp.	07

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