

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3162202****Date:13-12-2022****Subject Name:Underground Metalliferous Mining****Time:02:30 PM TO 05:00 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) Define the term: Raise, Winze and Stope.	03
	(b) Describe the present status of Indian metal mining industry.	04
	(c) Explain square set stopping method and its applicability.	07
Q.2	(a) Discuss the mine horizontal and vertical development.	03
	(b) Give the detail classification of stopping methods.	04
	(c) Explain sublevel stoping method and its applicability with neat sketch.	07
	OR	
	(c) Explain shrinkage stopping method and its applicability with neat sketch..	07
Q.3	(a) List out various factors affecting for selection of stopping methods.	03
	(b) Describe the applicability condition for the room and pillar mining method.	04
	(c) Explain the physical and mechanical characteristics of the ore and the enclosing rocks.	07
	OR	
Q.3	(a) Discuss the shape, size and thickness of deposit.	03
	(b) Define the term: Ore passes, Chutes, Garages and Grizzlies.	04
	(c) Explain the desirable features of selecting a stoping method.	07
Q.4	(a) Explain the large-diameter blast hole method.	03
	(b) List the merits and demerits of the sublevel stoping method.	04
	(c) Explain room and pillar method with neat sketch.	07
	OR	
Q.4	(a) Discuss the advantages of square set stopping methods.	03
	(b) Describe the limitations and transportation of supported stopping methods.	04
	(c) Explain cut and fill stoping method with neat sketch.	07
Q.5	(a) Define caving method.	03
	(b) List the merits and demerits of the block caving method.	04
	(c) Explain sub-level caving method with neat sketch.	07
	OR	
Q.5	(a) Define mine closure.	03
	(b) Explain applicability and stope preparation of block caving method.	04
	(c) Explain the phases and planning guidelines for mine closure.	07
