

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024

Subject Code:3162202

Date:20-11-2024

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) List out various underground metal mining industry.	03
	(b) Define Adit, Incline, Shaft and Decline.	04
	(c) List out various factors affecting the selection of stopping method.	07
Q.2	(a) List out various drilling pattern used in underground metalliferous mining.	03
	(b) Define Raise, Winze, finger raise and Ramp.	04
	(c) Give classification of stopping methods.	07
	OR	
	(c) Explain burn cut pattern with neat sketch.	07
Q.3	(a) Write short note on large dia. blast hole stoping.	03
	(b) Explain ore bin and waste bin.	04
	(c) Explain drop raising with neat sketch.	07
	OR	
Q.3	(a) Define ore pass, chute and grizzly.	03
	(b) Explain raising by alimake raise climber in brief.	04
	(c) Explain sub level stoping method.	07
Q.4	(a) Explain in brief: Room and Pillar method	03
	(b) Explain recovery and dilution.	04
	(c) Explain cut and fill stoping method.	07
	OR	
Q.4	(a) List out applicability conditions of caving method.	03
	(b) Write short note on shrinkage stoping.	04
	(c) Explain block caving method.	07
Q.5	(a) Explain level interval.	03
	(b) Explain pneumatic back filling.	04
	(c) Write advantages and disadvantages of square set stoping.	07
	OR	
Q.5	(a) Explain mechanical back filling.	03
	(b) Explain sub level caving.	04
	(c) Explain phases and planning for mine closure.	07
