

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) – EXAMINATION – SUMMER 2019****Subject Code:2162202****Date:10/05/2019****Subject Name:Underground Metal Mining****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.

		MARKS
Q.1	(a) Define the following term: Cross cut, Chute, and Garages.	03
	(b) Describe classification of different stopping methods.	04
	(c) Explain room and pillar method with neat sketch.	07
Q.2	(a) Describe present status of Indian metal mining industry.	03
	(b) Define the following term: Stope, Stopping, Crown pillar and Grizzlies.	04
	(c) Explain top slicing stopping method with neat sketch.	07
	OR	
	(c) Explain sub-level stopping method with neat sketch.	07
Q.3	(a) Explain how working is carried out in metal mine when ore body is wide.	03
	(b) Describe the basic fundamental of cut & fill method.	04
	(c) Explain under hand stopping method with neat sketch.	07
	OR	
Q.3	(a) Explain ore and waste bin with neat sketch.	03
	(b) Differentiate between pneumatic and mechanical method of backfilling.	04
	(c) Explain over hand stopping method with neat sketch.	07
Q.4	(a) Describe skip-pockets in details.	03
	(b) Explain underground crushing.	04
	(c) Discuss the various points to be considered for selection of stopping methods.	07
	OR	
Q.4	(a) List out the different types of backfilling methods used in metal mining. Explain hydraulic backfilling.	03
	(b) Describe blast hole and vertical crater retreat method.	04
	(c) Explain stopping of super-imposed veins and parallel ore bodies.	07
Q.5	(a) Explain haulage and dumping.	03
	(b) Write a note on construction of mine portal.	04
	(c) Explain secondary breaking in brief.	07
	OR	
Q.5	(a) Describe design and construction of draw points.	03
	(b) Write a note on recovery and dilution.	04
	(c) Explain stope layouts and stop preparation work in underground metal mining.	07
