Seat No.:	Enrolment No
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## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2162202 Date: 27/04/2017

**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		Short Questions	14
	1	Define Raise.	
	2	Define Winze.	
	3	Define Stope.	
	4	Define ore and waste bins.	
	5	What do you mean by cross cut in metal mining?	
	6	Which methods are used for working of inclined deposits?	
	7	What is cut and fill stopping?	
	8	Explosives are stored at which place in underground mines?	
	9	List out different types of haulages used in underground metal mining?	
	10	What is square set stopping?	
	11	What is underhand stopping?	
	12	Home and will stelle in a place for dumping in underground metal mining?	
	13	List out methods of secondary breaking.	
	14	Define hydraulic backfilling.	
Q.2	(a)	List out various factors affecting for selection of stopping methods.	03
	<b>(b)</b>	Explain shaft insets and plats with neat sketch.	04
	<b>(c)</b>	Explain the present status of Indian metal mining industry.	07
		OR	
	<b>(c)</b>	Explain secondary breaking in brief.	07
Q.3	(a)	Describe Skip pockets in brief.	03
	<b>(b)</b>	Give the detail classification of stopping methods.	04
	(c)	Explain top slicing method with neat sketch.	07
		OR	
Q.3	(a)	Explain advantages of square set stopping methods.	03
	<b>(b)</b>	Explain Ore passes, chutes, garages and grizzlies.	04
	(c)	Explain sub-level caving method with neat sketch.	07
<b>Q.4</b>	(a)	Explain haulage and dumping.	03
	<b>(b)</b>	Differentiate between overhand and underhand stopping method.	04
	(c)	Describe pneumatic and mechanical methods of backfill.	07
		OR	
Q.4	(a)	Explain sand gathering plant.	03
•	<b>(b)</b>	Explain advantages of supported stopping methods.	04
	(c)	Explain room and pillar method with neat sketch.	07
Q.5	(a)	Explain Blast hole and vertical crater retreat method.	03
Z	(b)	Explain recovery and dilution.	03

	(c)	Explain stope layouts and stop preparation work in underground metal mining.	07
		OR	
Q.5	(a)	Write a note on underground crushing.	03
	<b>(b)</b>	Describe design and construction of draw points.	04
	(c)	Explain stopping of super-imposed veins and parallel ore bodies.	07

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