

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018

Subject Code: 2162202

Date: 16/11/2018

Subject Name: Underground Metal 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.

		MARKS	
Q.1	(a) Explain: (i) Chutes (ii) Grizzlies and (iii) Shaft insets	03	
	(b) Explain: Ore and waste bins	04	
	(c) Classification of stoping methods based on its deposits characteristics.	07	
Q.2	(a) Which are the subsidiary excavations are required in underground metalliferous mining?	03	
	(b) Draw a principal layout of a metal mine.	04	
	(c) Explain: Secondary blasting	07	
<b>OR</b>			
Q.3	(c) Explain: Principles for development of metal mine.	07	
	(a) Explain in brief open raising method.	03	
	(b) Explain the VCR method.	04	
Q.3	(c) Describe the Drop raising method with neat sketch.	07	
	<b>OR</b>		
	(a) Explain: Raising by long hole drilling	03	
Q.4	(b) Describe the two or three compartment method.	04	
	(c) Explain in detail the Alimak raise climber method.	07	
	(a) Explain in brief open stoping method.	03	
Q.4	(b) Give comparison between underhand and overhand stoping.	04	
	(c) Describe the shrinkage stoping method with sketch.	07	
	<b>OR</b>		
Q.4	(a) Explain in brief underhand stoping method.	03	
	(b) Write down the applicability and preparatory work for sub-level stoping method.	04	
	(c) List out the factors for the choice of method of mining.	07	
Q.5	(a) Explain: Underground crusher	03	
	(b) Write down the applicability of square set stoping method.	04	
	(c) Explain in detail cut and fill stoping method.	07	
<b>OR</b>			
Q.5	(a) Write the applicability of top slicing.	03	
	(b) Write the disadvantages of block caving.	04	
	(c) Explain in detail sub-level caving.	07	

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