

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2172208****Date: 29/11/2018****Subject Name: Mine Planning****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) Describe the role of planning in mining venture.	03
	(b) Define Reserve. Explain various types of reserve.	04
	(c) What is mine planning and design? Discuss the components of mine planning.	07
Q.2	(a) Define the following term: Cut-off grade, Powder factor and Stripping ratio.	03
	(b) What is life of mine? Submit three common mathematical expressions to calculate the same.	04
	(c) Discuss the role of bench geometry and mine layouts in surface mine planning.	07
	<b>OR</b>	
	(c) Describe the role of feasibility study report for metallic minerals.	07
Q.3	(a) What is the importance of haul road in opencast mine?	03
	(b) Explain different techniques for reserve estimation.	04
	(c) Explain how cut-off grade is determined.	07
	<b>OR</b>	
Q.3	(a) Explain Taylor's mine life rule.	03
	(b) Describe the parameters affecting haul road design.	04
	(c) What do you mean by grade tonnage curve? Explain their computation.	07
Q.4	(a) What are the advantages and amendments in mine closure planning?	03
	(b) Differentiate between geological reserve and mineable reserve.	04
	(c) List out different phases of planning process? Explain production planning.	07
	<b>OR</b>	
Q.4	(a) Describe factors affecting to planning and designing of a surface mine.	03
	(b) Write a note on rate of production.	04
	(c) Explain mining system and sub-system in underground mine planning.	07
Q.5	(a) Write a short note on ultimate pit configuration?	03
	(b) Discuss the various economic considerations for optimization of mine design.	04
	(c) Discuss the various legal aspects of mine closure planning.	07
	<b>OR</b>	
Q.5	(a) What do you mean by mining losses? Explain how it is affecting life of mine.	03
	(b) Describe the role of planning and scheduling of production in underground mining venture.	04
	(c) Prepare a detailed project report of any mines you have visited.	07

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