

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2017****Subject Code: 2172201/2172208****Date: 02/11/2017****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) Define the following term: Bench Height, Bench Width and Stripping Ratio.	03
	(b) What is the role of planning in mining venture?	04
	(c) What is mine planning and design? What are the components of mine planning? Explain it in brief.	07
Q.2	(a) Describe Taylor's mine life rule.	03
	(b) Describe parameter affecting design of haul road.	04
	(c) What is cut off grade? How it is determine? Explain in brief.	07
	<b>OR</b>	
	(c) What do you mean by grade tonnage curve? Explain their computation.	07
Q.3	(a) Describe factors affecting to planning and designing of a surface mine.	03
	(b) Define Reserve. Explain various types of reserve.	04
	(c) Explain the role of planning and scheduling of production in underground mining.	07
	<b>OR</b>	
Q.3	(a) Write a short note on ultimate pit configuration?	03
	(b) Explain different techniques for reserve estimation.	04
	(c) What is the role of bench geometry and mine layouts in surface mine planning?	07
Q.4	(a) Write a short note on rate of production.	03
	(b) Explain mining system and sub-system in underground mine planning.	04
	(c) What is role of Feasibility study report for metallic minerals?	07
	<b>OR</b>	
Q.4	(a) What do you mean by mining losses? How it is affecting life of mine?	03
	(b) What are the various economic considerations for optimization of mine design?	04
	(c) Prepare a detailed project report of any mines you have visited.	07
Q.5	(a) What do you mean by optimal geometric size of a mine?	03
	(b) What are various economic considerations for optimization of mine design?	04
	(c) List out different phases of planning process? Explain production planning.	07
	<b>OR</b>	
Q.5	(a) What are the advantages and amendments in mine closure planning?	03
	(b) Differentiate between geological reserve and mineable reserve.	04
	(c) Explain the various legal aspects of mine closure planning.	07

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