

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019****Subject Code: 2172208****Date: 23/11/2019****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 Powder Factor.	03
	(b) What do you mean by mine planning? Discuss the role of mine planning in mining.	04
	(c) What is mine planning and design? Explain the components of mine planning in brief.	07
Q.2	(a) Discuss the importance of haul road in opencast mines.	03
	(b) Define Reserve. Explain various types of reserve.	04
	(c) List out different phases of planning process. Explain production planning.	07
	OR	
	(c) Discuss the role of feasibility report for metallic and non-metallic minerals.	07
Q.3	(a) Describe parameter affecting design of haul road.	03
	(b) Describe factors affecting to planning and designing of a surface mine.	04
	(c) What is cut off grade? Explain how it is determined.	07
	OR	
Q.3	(a) Discuss the mining system and sub-system in underground mines.	03
	(b) What is reserve estimation? Explain different techniques for reserve estimation.	04
	(c) What do you mean by grade tonnage curve? Explain their computation.	07
Q.4	(a) Discuss the advantages and amendments in mine closure planning	03
	(b) What is life of mine? Submit three common mathematical expressions to calculate the same.	04
	(c) Explain the various legal aspects of mine closure planning.	07
	OR	
Q.4	(a) Differentiate between geological reserve and mineable reserve.	03
	(b) Discuss the various economic considerations for optimization of mine design.	04
	(c) Explain the role of planning and scheduling of production in underground mines.	07
Q.5	(a) Write a short note on ultimate pit configuration.	03
	(b) Explain the determination of mine size and Taylors mine life rule.	04
	(c) As a Mining engineers prepare a detailed project report of any mines you have visited.	07
	OR	
Q.5	(a) What do you mean by mining losses? How it is affecting life of mine?	03
	(b) Explain the role of geometrical size of a mine in underground mining.	04
	(c) Explain the role of bench geometry and mine layouts in surface mines.	07
