

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020

Subject Code:2172208

Date:19/01/2021

Subject Name:Mine Planning

Time:10:30 AM TO 12:30 PM

Total Marks: 56

Instructions:

1. Attempt any FOUR questions out of EIGHT 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 do you mean by mine planning? Discuss the role of mine planning in	04
	(c) Discuss the role of feasibility report for metallic and non-metallic minerals.	07
Q.2	(a) Discuss the advantages and amendments in mine closure planning	03
	(b) Describe factors affecting to planning and designing of a surface mine.	04
	(c) Define mine planning and design. Explain the components of mine planning in brief.	07
Q.3	(a) Describe parameter affecting design of haul road.	03
	(b) Explain the determination of mine size and Taylors mine life rule.	04
	(c) Explain the role of planning and scheduling of production in underground mines.	07
Q.4	(a) Discuss the importance of haul road in opencast mines.	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
Q.5	(a) Write a short note on ultimate pit configuration.	03
	(b) Define reserve estimation. Explain different techniques for reserve estimation.	04
	(c) Define cut off grade. Explain how it is determined.	07
Q.6	(a) Define the mining losses. Explain how it is affecting life of mine.	03
	(b) Define Reserve. Explain various types of reserve.	04
	(c) What do you mean by grade tonnage curve? Explain their computation.	07
Q.7	(a) Differentiate between geological reserve and mineable reserve.	03
	(b) Define term life of mine. Submit three common mathematical expressions to calculate the same.	04
	(c) Explain the various legal aspects of mine closure planning.	07
Q.8	(a) Discuss the mining system and sub-system in underground mines.	03
	(b) Discuss the various economic considerations for optimization of mine design.	04
	(c) As a Mining engineers prepare a detailed project report of any mines you have visited.	07
