

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER- VII EXAMINATION-SUMMER 2023****Subject Code: 3172208****Date: 27/06/2023****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.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

Q.1	(a) Discuss about mine planning and its importance.	03
	(b) Write a short note on stage/phases of mine life.	04
	(c) Explain any two method of ore reserve estimation with sketch.	07
Q.2	(a) Write the components of mine planning.	03
	(b) Discuss the objectives and principles of ore reserve estimation.	04
	(c) Describe the types of grade and its estimation in mine planning.	07
	OR	
	(c) Explain in detail: Ultimate pit configuration and its determination.	07
Q.3	(a) What do you mean by Probable Ore Reserve & Proved Ore Reserve?	03
	(b) Draw a neat sketch of bench geometry and explain it.	04
	(c) Discuss the contents and preparation of feasibility report of surface mine.	07
	OR	
Q.3	(a) Which factors are affects to planning and designing of surface mines?	03
	(b) Explain the Taylor's mine life rule in details.	04
	(c) Narrate the preparation and economic evaluation for underground coal mine planning.	07
Q.4	(a) Write a note on factors affecting on choice of mining equipment.	03
	(b) What is haul road? Discuss its importance in opencast mines.	04
	(c) Give a brief note on production planning for underground metal mining.	07
	OR	
Q.4	(a) What is mine closure? Discuss its impact.	03
	(b) Discuss the influence of pit slope on mine economics.	04
	(c) Explain the terms in details: (1) Stope reserve (2) Stripping ratio (3) Mining revenue and costs.	07
Q.5	(a) Which parameters are considered for selection of suitable stopping methods?	03
	(b) Discuss the mine system and sub-system of underground coal mining with necessary sketch.	04
	(c) Write a note on legal aspects and technical parameters are considered for mine closure.	07
	OR	
Q.5	(a) Determine mine size in details and its process.	03
	(b) Write the advantages and disadvantages of mine closure planning.	04
	(c) Discuss the Stability analysis and design methodology for waste dumps.	07
