

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III EXAMINATION – SUMMER 2025

Subject Code:3132201

Date:31-05-2025

Subject Name: Introduction to Mining

Time: 02:30 PM TO 05:00 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.
- 5.

MARKS

Q.1*	(a) Differentiate between the term Ore and Mineral.	03
	(b) Define the following terms; a) Adit & Shaft                      (b) Stopping & Stope	04
	(c) Define drilling & their operational components. Discuss the types of drilling method based on their principle of working.	07
Q.2	(a) Write the purpose of drilling.	03
	(b) Differentiate the following terms: a) Level & Crosscut      b) Development & Depillaring	04
	(c) Write a brief note on “stages of life of mine”.	07
OR		
	(c) Explain the various methods of prospecting and Exploration of the minerals.	07
Q.3	(a) What is Raise and Winze?	03
	(b) Define explosive & its basic composition.	04
	(c) Briefly explain the properties of explosive.	07
OR		
Q.3	(a) Name the factors influencing the selection of drill machine.	03
	(b) Explain the role of exploration and Prospecting in defining the life of mine.	04
	(c) Write short note on the following: a) ANFO explosive      b) Slurry explosive	07
Q.4	(a) What do you mean by drillability of rock?	03
	(b) What is borehole logging?	04
	(c) Explain mine closure and its importance.	07
OR		
Q.4	(a) What do you mean by blasting?	03
	(b) How mineral reserves improve the technological growth of nation? Explain briefly.	04
	(c) Write a brief note on Jack hammer drill & Wagon drill.	07
Q.5	(a) Name the mining method used for coal and non-coal deposit.	03
	(b) Explain permitted explosive and its type.	04
	(c) How development of surface mining is done? Explain briefly.	07
OR		
Q.5	(a) What do you understand by unit operation of mining?	03
	(b) List out various difficulties faced during boring.	04
	(c) Explain core recovery in details.	07

\*\*\*\*\*