

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2024****Subject Code:3132201****Date:29-06-2024****Subject Name: Introduction to Mining****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) Define Mining, Surface Mining and Underground Mining.	03
	(b) Give classification of surface and underground mining.	04
	(c) Explain various methods of drilling.	07
Q.2	(a) Explain the mineral resourced of Gujarat and India.	03
	(b) Describe various unit operations involved in surface and underground mining.	04
	(c) Explain core recovery in details.	07
	OR	
	(c) Explain directional drilling and deflection of boreholes.	07
Q.3	(a) Describe the drillability of rocks.	03
	(b) List out various difficulties faced during boring.	04
	(c) Explain different types of drill bits and its selection.	07
	OR	
Q.3	(a) List of various transportation equipment used in surface and underground mining.	03
	(b) Differentiate between surface and underground mining.	04
	(c) Explain various stages of mining.	07
Q.4	(a) Give classification of explosive.	03
	(b) Write short note on various properties of explosive.	04
	(c) Explain basic concept of blasting.	07
	OR	
Q.4	(a) Explain prospecting.	03
	(b) Explain the various equipment and accessories used in drilling.	04
	(c) Explain the development of surface mining.	07
Q.5	(a) Explain principle of boring.	03
	(b) Explain various drilling pattern used in surface mining.	04
	(c) Explain the development of underground mining.	07
	OR	
Q.5	(a) Explain interpretation of borehole data and borehole logging.	03
	(b) Explain various drilling pattern used in underground mining.	04
	(c) Explain mine closure and its importance.	07
