

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-IV (NEW) EXAMINATION – SUMMER 2022****Subject Code:3142208****Date:02-07-2022****Subject Name:Mining Geology****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
<b>Q.1</b>	(a) What is petrology?	<b>03</b>
	(b) What are mountains? Explain types of mountain	<b>04</b>
	(c) What is volcano? How are they formed? Discuss the types of volcanoes.	<b>07</b>
<b>Q.2</b>	(a) How are igneous rocks formed?	<b>03</b>
	(b) Write a note on lineation.	<b>04</b>
	(c) What is the different between magma and lava? Explain the various structures developed due to the mobility of magma or lava in igneous rocks.	<b>07</b>
	<b>OR</b>	
	(c) What is tunnel. Discuss the geological factors to be taken care in the design of a tunnel.	<b>07</b>
<b>Q.3</b>	(a) List out different types of igneous intrusion.	<b>03</b>
	(b) Write a note on Seismic Zones of India.	<b>04</b>
	(c) Describe how sedimentary rocks formed?	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) What is texture and structure?	<b>03</b>
	(b) Give the difference between a fault and a fold.	<b>04</b>
	(c) Describe various textures observed in metamorphic rocks.	<b>07</b>
<b>Q.4</b>	(a) Describe how metamorphic rocks are formed.	<b>03</b>
	(b) Describe the “Jurassics of Kutch”.	<b>04</b>
	(c) Discuss how the geological factors influence the selection of tunnel alignments.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain the causes of earthquake.	<b>03</b>
	(b) Describe different agents and kinds of metamorphism.	<b>04</b>
	(c) Classify and describe Rhyolite, Shale, Phyllite.	<b>07</b>
<b>Q.5</b>	(a) What are the causes of landslide?	<b>03</b>
	(b) Describe structures of sedimentary rocks.	<b>04</b>
	(c) What are the preventive measures for landslide?	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) What is Sill and Dyke?	<b>03</b>
	(b) Describe economics of deccan traps.	<b>04</b>
	(c) Give classification of Igneous Rocks.	<b>07</b>

\*\*\*\*\*