

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(NEW) EXAMINATION – WINTER 2022****Subject Code:3142208****Date:16-12-2022****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

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| Q.1 | (a) How are igneous rocks formed? | 03 |
| | (b) Discuss about different processes of mountain genesis. | 04 |
| | (c) What are earthquakes? Narrate the geological causes of their occurrence. | 07 |
| Q.2 | (a) Write Note on :Types of joints | 03 |
| | (b) Write a note on Mesozoics of Gujarat. | 04 |
| | (c) Write Note on: Lineation and schistosity | 07 |
| | OR | |
| | (c) Describe the structure of metamorphic rocks. | 07 |
| Q.3 | (a) What are the different metamorphic facies? | 03 |
| | (b) What is volcano? Classify the volcanoes on the basis of their state of activity. | 04 |
| | (c) What is the difference between magma and lava? Explain the various structures developed due to mobility of magma or lava in igneous rocks. | 07 |
| | OR | |
| Q.3 | (a) Explain the stages of development for tectonic mountains. | 03 |
| | (b) What is the difference between joint and fault? What are the causes of jointing? | 04 |
| | (c) How the sedimentary rocks are classified? Give the classification of clastic rocks. | 07 |
| Q.4 | (a) List out important textures shown by igneous rocks. | 03 |
| | (b) Write a note on seismic zones of India. | 04 |
| | (c) What are landslides and how those can be prevented? | 07 |
| | OR | |
| Q.4 | (a) Explain “Jurassic of Kutch”. | 03 |
| | (b) What is tunnel? How the geological factors influences the tunnel excavation? | 04 |
| | (c) Describe the geological factors to be considered for investigation of dams? | 07 |
| Q.5 | (a) Explain different forms of igneous rocks with figure. | 03 |
| | (b) Describe sills and dykes with sketches. | 04 |
| | (c) Explain multi-generation folding. | 07 |
| | OR | |
| Q.5 | (a) What are the types of Volcanoes? | 03 |
| | (b) Describe Granite and Basalt. | 04 |
| | (c) What is Non-clastic rock? Give the petrological characters and types of Limestone. | 07 |
