

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – SUMMER 2024****Subject Code: 3172210****Date: 30-05-2024****Subject Name: Mine Mineral Economics****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.

MARKS

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|------------|--------------------------------------------------------------------------------------------------------------------|-----------|
| Q.1 | (a) Explain capital cost and operating cost. | 03 |
| | (b) How are mineral losses classified? How are these losses incorporated in mining | 04 |
| | (c) Describe various functions of national mineral policy 2012. | 07 |
| Q.2 | | |
| | (a) What do you understand by the term sampling and why it is important for the industry? | 03 |
| | (b) Discuss the risky nature of the mining industry. | 04 |
| | (c) Explain budget and budgetary control in brief. | 07 |
| OR | | |
| | (c) Enumerate the different types of internal sampling errors according to Pierre Gy's theory of sampling. | 07 |
| Q.3 | | |
| | (a) Write a short note on ore classification. | 03 |
| | (b) Explain dilution and recovery. | 04 |
| | (c) Explain conservation of mineral resources, scope and their limitations. | 07 |
| OR | | |
| Q.3 | (a) Enumerate the purpose of mine accounting. | 03 |
| | (b) What are standard costs and what is its importance in decision making in an industry. | 04 |
| | (c) Describe the different types of sampling method used in mine. | 07 |
| Q.4 | | |
| | (a) What should be the ideal basic principles of mining taxation? | 03 |
| | (b) What do you understand by ABC analysis? What are its advantages? | 04 |
| | (c) Enumerate the different methods of calculating depreciation and compare them. | 07 |
| OR | | |
| Q.4 | (a) Discuss the composition and economic significance of mineral inventory. | 03 |
| | (b) Discuss the regulatory and developmental objectives of taxation. | 04 |
| | (c) Explain different methods for reduction of sample. | 07 |
| Q.5 | | |
| | (a) State the assumption on which cost-volume-profit analysis is used. | 03 |
| | (b) State the desirable features of depreciation methods. | 04 |
| | (c) What do you understand by mine valuation? Explain Hoskold's and modern concepts for present value computation. | 07 |
| OR | | |
| Q.5 | (a) What are the precautions to be taken during sampling? | 03 |
| | (b) Discuss the basic concept and classification of tax systems. | 04 |
| | (c) Describe the different methods of mine valuation and their application. | 07 |
