

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– VII (New) EXAMINATION – WINTER 2019****Subject Code: 2172204****Date: 03/12/2019****Subject Name: Mineral Processing****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.

- Q.1** (a) Define the following term: (1) Ore (2) Mineral (3) Crushing. **03**
(b) Explain sieve analysis. **04**
(c) Define Classification. Explain classifier with sketch. **07**
- Q.2** (a) What is purpose of Collectors? **03**
(b) Write a short note on basic fundamental of ore dressing. **04**
(c) Explain Communion and Liberation in detail. **07**
- OR**
- (c) Describe Electrostatic Separation in detail. **07**
- Q.3** (a) Draw flow sheet of Bituminous coal. **03**
(b) Write a short note on Ball mill. **04**
(c) Differentiate between Crushing and Grinding. **07**
- OR**
- Q.3** (a) What is gravity concentration? **03**
(b) Write note on Jigging. **04**
(c) Explain Heavy Media Separation with neat sketch. **07**
- Q.4** (a) What is shaking table. **03**
(b) Write a short note on sampling. **04**
(c) Why Mineral Processing is required? Explain different steps of mineral processing. **07**
- OR**
- Q.4** (a) Write a short note on Thickening. **03**
(b) Write a note on Coal Washing. **04**
(c) Explain the drying and dewatering process for coal. **07**
- Q.5** (a) Define mineral processing. **03**
(b) Write a Short note on Froth flotation. **04**
(c) List out different types of Screens. Explain any two with sketch in detail. **07**
- OR**
- Q.5** (a) Write merit of mineral processing. **03**
(b) What is Sizing? What are the different methods of sizing used in Laboratory? **04**
(c) Draw and explain flow sheet for lead and zinc. **07**
