

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VII • EXAMINATION – SUMMER • 2014

Subject Code: 172204**Date: 29-05-2014****Subject Name: Mineral Processing****Time: 02:30 pm - 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.

- Q.1 (a)** Define terms like Ore, Mineral, Concentration, Crushing, Grinding, Middling and Tailing. **07**
- (b)** Give the classification of industrial screens. Explain it briefly. **07**
- Q.2 (a)** Short note on Froth flotation. **07**
- (b)** Draw flow sheet for concentrating plant for a magnetite ore. **07**
- OR**
- (b)** Explain ball mill? Classify the various zones created in ball mill during grinding. **07**
- Q.3 (a)** Give classification of Crushers. Explain the jaw crusher. **07**
- (b)** What is sizing? Explain sieve analysis in detail. **07**
- OR**
- Q.3 (a)** Define Liberation and Comminution. What do you understand by 'Open circuit' and 'Closed circuit' grinding? **07**
- (b)** Write short note on operation of Jigging machine. **07**
- Q.4 (a)** Draw a simplified flow sheet of beneficiation of lead-zinc ore. **07**
- (b)** Explain briefly on electrostatic separator. **07**
- OR**
- Q.4 (a)** What is magnetic separation? Which are the materials usually separable by magnetic separation? **07**
- Q.4 (b)** Draw flow sheet for beneficiation of Copper ore. **07**
- (a)** Explain Heavy media separation in brief **07**
- Q.5 (b)** What is classification? What are different types of classifiers? Explain air classifier. **07**
- OR**
- Q.5 (a)** What is the importance of sampling and explain method used in ore dressing. **07**
- (b)** Draw flow sheet of bituminous coal. **07**
