

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-4 • EXAMINATION - WINTER 2014

Subject Code:142201

Date: 22/12/2014

Subject Name: Mining Machinery-I

Time: 2.30 PM - 5.00 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) What are the parameters that are to be taken care for the distribution of compressed air? 07
(b) Explain the advantages and disadvantages of compressed air over other power sources. 07
- Q.2** (a) Describe the construction of conveyer haulage. 07
(b) What type of maintenance is necessary for the aerial ropeways? 07
- OR**
- (b) Explain the construction of profile dumpers. 07
- Q.3** (a) What are the different types of wire ropes used in mines? 07
(b) Describe the process of capping the wire ropes. 07
- OR**
- Q.3** (a) Explain the role of mine tubs and cars for transportation. 07
(b) What are the calculations done for the construction of rope haulage? 07
- Q.4** (a) Explain in brief about types of mine locomotives. 07
(b) Why rope changing is done in wire ropes and Why? 07
- OR**
- Q.4** (a) What precautions are taken care for gage selection and lying down of tracks? 07
(b) What are the design parameters for distribution pipeline of compressed air? 07
- Q.5** (a) Write note on any two : 14
1. Rope slicing.
2. Track maintenance.
3. Types of conveyer haulage.
4. Maintenance of mine locomotives.
