

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION – SUMMER • 2014

Subject Code: 142201

Date: 16-06-2014

Subject Name: Mine Machinery-I

Time: 10:30 am - 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) Purpose, scope and application of conveyor haulage system 7
(b) Describe Aerial ropeway. 7
- Q.2 (a) Classify types of wire ropes used in mines. 7
(b) Describe splicing of rope. 7
- OR**
- (b) Describe capping of rope. 7
- Q.3 (a) Explain i) Mass of rope ii) Strength of rope. 7
(b) Types of mine locomotive. 7
- OR**
- Q.3 (a) Selection parameters of wire ropes. 7
(b) Shortnote: Tubs and minecars. 7
- Q.4 (a) Advantages and disadvantages of endless rope haulage. 7
(b) Explain main & tail rope haulage with sketch. 7
- OR**
- Q.4 (a) Explain direct rope haulage with sketch. 7
(b) Advantages of gravity rope haulage. 7
- Q.5 (a) Draw pit-top layout for cage winding. 7
(b) Define following terms 7
i) Backstay ii) Stop block iii) Back catch iv) Drop warwick.
- OR**
- Q.5 (a) Draw pit bottom layout for cage winding. 7
(b) Describe main methods of underground transport. 7
