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