

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Examination June- 2010****Subject code: 142201****Subject Name: Mining Machinery-I****Date: 17 / 06 /2010****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) Explain the process of splicing a wire rope with descriptive figure. **07**
(b) Explain different types of Aerial ropeways and maintenance procedure practice in mines. **07**
- Q.2** (a) Explain selection parameters for wire rope **07**
(b) Describe different types of Rope Haulages used in mines **07**
- OR**
- (b) Describe haulage track, its lying method and maintenance procedure. **07**
- Q.3** (a) Explain Endless rope haulage system with figure. **07**
(b) Explain disadvantages of Direct haulage. **07**
- OR**
- Q.3** (a) Different types of mines locomotives & their operation. **07**
(b) Explain advantages & disadvantages of endless haulage. **07**
- Q.4** (a) Explain Haulage track its lying and gage –selection in mines. **07**
(b) Describe procedure of Cone –Socket type caple with figure. **07**
- OR**
- Q.4** (a) Essential parameters of a good haulage track **07**
(b) Explain stranded ropes & Non-stranded wire ropes **07**
- Q.5** (a) Rope tensioning arrangement in Aerial ropeways. **07**
(b) Explain isothermal and adiabatic compression and expansion of Air **07**
- OR**
- Q.5** (a) State the type of rope to be used for & why ? : (i) Winding rope, (ii) Coal cutting machine, (iii) Guide rope **07**
(b) Explain law profile dumpers and shuttle car used in mines. **07**
