

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152201****Date: 11-01-2013****Subject Name: Mining Machinery - II****Time: 02:30 pm to 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) List out safety devices in winders. **07**  
(b) Explain principal of operation & construction features of coal plough. **07**

- Q.2** (a) Explain the purpose and design of headgear with neat illustrative diagram. **07**  
(b) Describe pit top layout with neat sketch. **07**

**OR**

- (b) Write short note on various types of detaching hooks **07**

- Q.3** (a) Discuss the multirope winding with its merits and demerits. **07**  
(b) Explain any one method of mechanical breaking. **07**

**OR**

- Q.3** (a) Define the Ward Leonard method of speed control. **07**  
(b) Describe with sketch (i) Rigid guides and (ii) Rope guides. **07**

- Q.4** (a) List out the various mechanical loader used in underground mines and explain side discharge loader with diagram. **07**  
(b) Explain parameters for selecting coal cutting equipment. **07**

**OR**

- Q.4** (a) Describe Continuous Miner with general layout at the face. **07**  
**Q.4** (b) Explain (i) gathering arm loader and (ii) fleet angle **07**

- Q.5** (a) What are the different shaft fittings used in shaft? **07**  
(b) Describe the different signalling system used in mines. **07**

**OR**

- Q.5** (a) Define (i) creepers (ii) tippler (iii) mineral handling and screening equipment. **07**  
(b) What do you mean by workability of coal? **07**

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