

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-V • EXAMINATION – SUMMER • 2014

Subject Code: 152201

Date: 11-06-2014

Subject Name: Mining Machinery - II

Time: 10:30 pm to 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 purpose and design of headgear with a neat illustrative diagram. 07

(b) Describe with sketch (i) Rigid guides and (ii) Rope guides. 07

Q.2 (a) Explain the following 07
(1) Skips (2) Cages (3) Suspension gear

(b) List out the safety devices in winders. 07

OR

(b) What do you mean by workability of coal? 07

Q.3 (a) Describe with a neat sketch pit top layout with a run round arrangement. 07

(b) Write a short note on (1) Creepers (2) Tipplers. 07

OR

Q.3 (a) Describe with a neat sketch pit top layout with a shunt back arrangement. 07

(b) What do you mean by side discharge loader? Explain it with diagram. What are the advantages and disadvantages of side discharge loader used in underground mines? 07

Q.4 (a) Explain the parameters for selecting coal cutting equipment. 07

(b) What is a koepe winding? Explain the merits & demerits of koepe winding system. 07

OR

Q.4 (a) Explain the principle of operation & construction features of coal plough. 07

(b) List out the various mechanical loaders used in underground mines. 07

Q.5 (a) Describe the Continuous Miner with general layout at the face. 07

(b) Define the ward Leonard method of speed control. 07

OR

Q.5 (a) Describe the different signalling systems used in mines. 07

(b) Write a short note on the various types of detaching hooks. 07
