

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV(New) • EXAMINATION – WINTER 2016

Subject Code:2142201

Date:21/11/2016

Subject Name:Mining Machinery-I

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.

	MARKS
Q.1 Short Questions	14
1 What is compressed air?	
2 When the air and mineral flow in same direction the Ventilation is called as	
3 What is the factor of safety for winding rope?	
4 What is the life of winding rope?	
5 Runway switch is used in....	
6 Keps are used in	
7 What is the purpose of wire gauge in flame safety lamp?	
8 Which instrument is used to measure cooling power of air	
9 Joining of two ropes is called as	
10 Where is Clifton pulley used?	
11 Where is Factor of Safety (FOS) applied in connection with winding?	
12 LHD stands for what?	
13 What is the role of pilot tube?	
14 What if booster fan is installed in one district of mine?	
Q.2 (a) Compare compressed air with other forms of power.	03
(b) Explain the types of aerial ropeways.	04
(c) Explain the construction and maintenance of dumpers.	07
OR	
(c) Explain the type of conveyer system with figure.	07
Q.3 (a) What the uses of wire ropes?	03
(b) Explain rope slicing.	04
(c) What is rope caple? Explain the process of capping.	07
OR	
Q.3 (a) Describe the role of track and mini car.	03
(b) What are the various attachments of Mine tubs and cars?	04
(c) What are the parameters for the distribution of compressed air?	07
Q.4 (a) What are the methods of transportation in mining?	03
(b) Give the importance of exhaust trap in diesel locomotive.	04
(c) Describe mine locomotives with construction.	07
OR	
Q.4 (a) Write note on low profile dumpers.	03
(b) Describe cone-Socket type capel.	04
(c) What are the essentials of good haulage track?	07

- Q.5 (a)** What are the advantages of gravity rope haulage? **03**
- (b)** Define (1) Back Catch (2) Stop Block. **04**
- (c)** Explain the distribution of compressed air in u/g mines. **07**
- OR**
- Q.5 (a)** Draw pit bottom layout for cage winding. **03**
- (b)** Explain the methods of underground transport. **04**
- (c)** Explain sleepers and ballast. **07**
