Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (NEW) - EXAMINATION - SUMMER 2017

Subject Code: 2142201 Date: 03/06/2017

Subject Name: Mining Machinery-I

Time: 10:30 AM 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.

			MARKS
Q.1		Short Questions	14
•	1	What is Lang's lay?	
	2	Write down the formula of strength of wire rope.	
	3	What is Socketing?	
	4	Which motor used in Endless rope haulage?	
	5	Write down the formula of super elevation.	
	6	Which type of pulley used in Endless rope haulage?	
	7	What is working of Lashing Chain?	
	8	What is monkey catch?	
	9	Explain only types of locomotive haulage.	
	10	Write down the gradient of Direct rope haulage.	
	11	Which machinery used in wire rope?	
	12	Define space of factor.	
	13	What is ordinary lay?	
	14	What is drop warwick?	
Q.2	(a)	Write the disadvantage of direct rope haulage.	03
۷	(b)	Write important feature of a good haulage track.	04
	(c)	Write note on Rope capping.	07
	(0)	OR	0,
	(c)	What are the advantages of compressed air over other power sources?	07
Q.3	(a)	Write short note on jack hammer.	03
	(b)	What are the criteria for selection of wire ropes?	04
	(c)	Explain Rope splicing in brief.	07
		OR	
Q.3	(a)	Write various applications of Aerial Ropeway.	03
	(b)	Explain the construction of mine tubs and car with diagram.	04
	(c)	Describe the various types and construction of wire ropes.	07
Q.4	(a)	Write a short note on Rope Tensioning Arrangement.	03
	(b)	Explain various types of Aerial rope way system.	04
	(c)	Differentiate between Main &Tail rope haulages and Endless rope	07
		haulage.	
		OR	
Q.4	(a)	Write a note on advantages of gravity rope haulage.	03
	(b)	Explain in brief the tests applied on wire.	04
	(c)	Explain the fully neat sketch of Non strand ropes.	07
Q.5	(a)	Define following terms:	03
	(b)	(i) Stop block ii) Back catch.Explain in brief preformed wire ropes.	04

	(c)	Describe the Main & Tail rope haulage.	07
		OR	
Q.5	(a)	Write a short note on Clifton pulley.	03
	(b)	Explain in brief working of scraper chain conveyor.	04
	(c)	Describe the Endless rope haulage.	07
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