

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) EXAMINATION – SUMMER 2019

**Subject Code: 2152201**

**Date: 20/06/2019**

**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.

		MARKS
<b>Q.1</b>	(a) Compare the rigid guides with flexible guides.	<b>03</b>
	(b) Compare cage winding with skip winding.	<b>04</b>
	(c) What are the different safety detaching hooks? Describe in detail one of it with sketch.	<b>07</b>
<b>Q.2</b>	(a) Explain: shaft fittings.	<b>03</b>
	(b) Write a short note on cage attachment to winding rope.	<b>04</b>
	(c) Explain head gear design with neat sketch.	<b>07</b>
	<b>OR</b>	
	(c) Explain keps in detail with sketch, advantages and disadvantages.	<b>07</b>
<b>Q.3</b>	(a) Write advantages of multi rope winders.	<b>03</b>
	(b) Compare drum winding with friction winding	<b>04</b>
	(c) List of safety devices on winders.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Explain: Multirope system of winding	<b>03</b>
	(b) Write down the disadvantages of koepe winding.	<b>04</b>
	(c) Explain with neat sketch: Mechanical breaks on winders.	<b>07</b>
<b>Q.4</b>	(a) Write an applicability of coal cutting machine.	<b>03</b>
	(b) Explain in brief list of screening equipment used in mines.	<b>04</b>
	(c) Explain and draw pit-top layout with run-round arrangement.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Explain: Maintenance of face loaders for coal mines.	<b>03</b>
	(b) Explain signaling system in mines.	<b>04</b>
	(c) Explain and draw pit-top layout/arrangement for a skip.	<b>07</b>
<b>Q.5</b>	(a) Explain: Coal plough	<b>03</b>
	(b) Describe the principle and operation of coal cutting machine.	<b>04</b>
	(c) Describe in detail any one continuous coal face machine which is used in longwall mining?	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Explain: Rocker shovel	<b>03</b>
	(b) Describe the continuous miner	<b>04</b>
	(c) Which are the different mechanical loaders used in underground coal mines? Describe gathering arm loader with sketch.	<b>07</b>

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