

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-V (NEW) EXAMINATION – WINTER 2020****Subject Code:2152201****Date:01/02/2021****Subject Name:Mining Machinery - II****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

	MARKS
Q.1 (a) Discuss the role of signaling system in winding.	03
(b) Describe the principle and operation of coal cutting machine.	04
(c) Explain head gear design with neat sketch.	07
Q.2 (a) Explain multi rope winding system.	03
(b) Describe the selection of face loaders for coal mines.	04
(c) Explain coal plough with their principle, operation and maintenance.	07
Q.3 (a) Compare the rigid guides with flexible guides.	03
(b) Explain the pit-top layout with neat sketch.	04
(c) List out different types of winding drums. Explain any one with neat sketch.	07
Q.4 (a) Differentiate between cage winding and skip winding.	03
(b) Explain the pit-bottom layout with neat sketch.	04
(c) Explain Ward Leonard control system with neat sketch.	07
Q.5 (a) List out various safety devices used in mines.	03
(b) Describe various shaft fittings provide in underground mines.	04
(c) Explain the principle types, operation and maintenance of face loaders.	07
Q.6 (a) Describe mineral handling and screening equipments.	03
(b) Explain in brief list of screening equipment used in mines.	04
(c) Explain the layout of faces for working with power loaders under varied conditions.	07
Q.7 (a) Describe the various construction features of Face loaders.	03
(b) Discuss the selection of coal plough.	04
(c) Explain electrical braking system of winding with neat sketch.	07
Q.8 (a) Discuss the efficiency of coal cutting machines and their selection.	03
(b) Discuss the selection procedure for continuous miner.	04
(c) Explain mechanical braking system of winding with neat sketch.	07
