

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2182202****Date:17/05/2019****Subject Name:Advance Mining Methods****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	(a) Explain the factors considered during the selection of power support.	03
	(b) Describe the problems of thick seam mining.	04
	(c) Write a note on Chock-shield type power support.	07
Q.2	(a) Write the problems faced during working of thin seam mining.	03
	(b) Write the precautions to be taken while working of seams liable to spontaneous heating.	04
	(c) Write a note on frame type of power support.	07
	<b>OR</b>	
	(c) Explain the basic structure of power support.	07
Q.3	(a) Describe the uni-directional method of working of Coal plough.	03
	(b) Write the advantages and disadvantages of horizon mining.	04
	(c) Explain Auger Mining methods and its application in U/G coal mining..	07
	<b>OR</b>	
Q.3	(a) Describe the bi-directional method of working of Coal plough..	03
	(b) Draw the layouts of Horizon mining method.	04
	(c) What do you mean by Underground Coal Gasification? Add note on its application.	07
Q.4	(a) Explain the latest development in power support.	03
	(b) Describe the working of deep-sea-mining with neat sketch.	04
	(c) Explain Bio chemical methods of mining.	07
	<b>OR</b>	
Q.4	(a) Describe the semi – horizon mining method.	03
	(b) Explain the past and present status of deep sea mining in India.	04
	(c) Explain Hydro chemical methods of mining.	07
Q.5	(a) Write the basic working principle of Hydraulic mining	03
	(b) Write advantages and disadvantages of Hydraulic Mining.	04
	(c) Describe the slicing method of thick seam mining.	07
	<b>OR</b>	
Q.5	(a) Write a short note on Ore mining by leaching.	03
	(b) Describe the application of single drum shearer in longwall mining.	04
	(c) Write a note on plans, layouts and operation of hydraulic mining.	07

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