

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2182202****Date: 29/11/2018****Subject Name: Advance Mining Methods****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	(a) Discuss the components of powered support.	03
	(b) Discuss the factors affecting choice of thick seam mining method.	04
	(c) What do you mean by hydraulic mining? Explain layout of hydraulic mining with neat sketch.	07
Q.2	(a) Explain general consideration before adopting horizon mining.	03
	(b) Discuss about latest development in powered support system.	04
	(c) Describe principles of operation and design of power support with neat sketch.	07
	OR	
	(c) Explain support system of longwall faces and depillaring.	07
Q.3	(a) What are the future scopes in underground coal gasification?	03
	(b) Discuss the application of powered support for wide excavation.	04
	(c) What do you mean by underground coal gasification? Explain factors affecting underground coal gasification.	07
	OR	
Q.3	(a) Discuss the suitable conditions for selection of hydraulic mining in brief.	03
	(b) Write advantages and disadvantages of underground coal gasification.	04
	(c) Explain deep-sea mining for manganese nodules.	07
Q.4	(a) Explain selection of powered support used in underground mining.	03
	(b) Describe the constructional features and application of power support.	04
	(c) Explain horizon mining with neat sketch.	07
	OR	
Q.4	(a) Write a note on ore mining by leaching.	03
	(b) Explain various equipment used in thin seam extraction.	04
	(c) Discuss the different application, merits and demerits of horizon mining.	07
Q.5	(a) Describe basic concepts of underwater mining.	03
	(b) Explain thick seam mine working in brief.	04
	(c) Explain the principle and operation of hydraulic mining with neat sketch.	07
	OR	
Q.5	(a) List out various methods used in thin seam extraction.	03
	(b) Explain methods of mining for radioactive minerals.	04
	(c) Explain the principle and operation of horizon mining with neat sketch.	07
