

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2152206****Date:27/11/2018****Subject Name:Underground coal Mining****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) What do you mean by stratified deposit? Write in brief.	03
	(b) What is stowing and write its merits and demerits.	04
	(c) Explain: Origin of coal and theories of it.	07
Q.2	(a) Write down the advantages and disadvantages of longwall mining methods.	03
	(b) Describe bord and pillar method with its advantages and disadvantages.	04
	(c) Write the factors influencing on choice of mining methods.	07
	OR	
	(c) Give a classification of underground coal mining with its brief discussions of each.	07
Q.3	(a) Explain: size of pillar	03
	(b) Write down the restrictions on development of mine.	04
	(c) Explain the development of bord and pillar working using continuous miner and coal cutting machine.	07
	OR	
Q.3	(a) Explain: size of panels	03
	(b) Explain: Working of Contiguous seams.	04
	(c) Write down the principles of pillar extraction techniques with its problems.	07
Q.4	(a) Explain: Variants of longwall face layouts.	03
	(b) Explain: Length of longwall face.	04
	(c) Which are the influenced factors for layout of longwall faces?	07
	OR	
Q.4	(a) Explain: Direction of face advance.	03
	(b) Classification of Modern longwall faces.	04
	(c) Elements of longwall face.	07
Q.5	(a) Explain: Principle of stowing.	03
	(b) Describe: Hand packing stowing method.	04
	(c) Describe a hydraulic stowing with its applicability and preparatory arrangement via brief discussion.	07
	OR	
Q.5	(a) Explain: Hydraulic Profile	03
	(b) Explain: Rate of stowing	04
	(c) Draw a neat sketch of general arrangement of a sand stowing with its brief discussion.	07
