

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2152205****Date:20/11/2018****Subject Name:Advance Mine Surveying****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 are the purposes of correlation survey in mining?	03
	(b) What are the necessary precautions and accuracy required during correlation survey?	04
	(c) Describe the coplaning method of correlation survey for surface and underground workings of mine.	07
Q.2	(a) Write the types of curve.	03
	(b) Write a note on designation of curve.	04
	(c) Draw and explain the elements of circular curve.	07
	<b>OR</b>	
	(c) Draw and explain elements of compound curve.	07
Q.3	(a) Write a note on tape triangulation.	03
	(b) Describe the planimeter with its applicability.	04
	(c) List of linear method of setting out of curve. Explain method when apex is accessible and apex is inaccessible.	07
	<b>OR</b>	
Q.3	(a) Describe the clinometers with sketch.	03
	(b) Describe the miner's dial with neat sketch.	04
	(c) Explain: Rankien's method.	07
Q.4	(a) Write the steps for preparation and preserve plan and section as per legal requirement.	03
	(b) Explain: enlargement of plans	04
	(c) Explain any one method of stope of surveying which are used in metal mines.	07
	<b>OR</b>	
Q.4	(a) Write the use of ediograph	03
	(b) Explain various types of mine models	04
	(c) Write any seven convention symbol for the preparation of mine plans and sections.	07
Q.5	(a) What is GPS? How is it useful in mining industry?	03
	(b) Describe the scale of vertical photograph.	04
	(c) Explain in detail GIS and its applicability in mining?	07
	<b>OR</b>	
Q.5	(a) Difference between photographs and maps	03
	(b) How photogrammetry is useful in mining engineering?	04
	(c) Two drives commence from a common starting point. One rises at an angle of $3^{\circ}$ going N50 <sup>0</sup> W the other dips $5^{\circ}$ going S30 <sup>0</sup> W. What is the direction and grade of the true dip?	07

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