Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-V • EXAMINATION - WINTER • 2014

	-	Code: 152204 Date: 01-12-2014	
Tir	_	Name: Advance Mine Surveying 0.30 am - 01.00 pm Total Marks: 70	
	1. 2. 3.		
Q.1	(a)	Define: (i) GIS, (ii) GPS and (iii) Remote sensing? Give Application of GIS in surveying and computation.	07
Q.2	<ul><li>(b)</li><li>(a)</li><li>(b)</li></ul>	Describe Measurement for scale of vertical photographs.  Discuss photograph v/s Map.  Define curve. Explain Rankine method for setting out of curve.	07 07 07
	<b>(b)</b>	<b>OR</b> Give the elements of compound curve.	07
Q.3	(a)	List out methods of enlarging and reduction of plans. Explain Eidograph and pantographs with neat sketch.	07
	<b>(b)</b>	Write short note on uses of miner's dial and hanging compass with clinometers and theodolite in stope surveying.	07
Q.3	(a)	<b>OR</b> What do you mean by mine models? Explain various mine models.	07
Q.C	(b)	Explain any one method of stope surveying which are used in metal mines.	07
Q.4	(a)	Two drives commence from a starting point. One rises at an angle of $3^{\circ}$ Going N $50^{\circ}$ W, the other dips $5^{\circ}$ going S $30^{\circ}$ W. What is the direction and grade of true dip?	07
	<b>(b)</b>	Explain correlation with gyro-theodolite with its uses and advantages.  OR	07
Q.4	(a)	The true dip of a seem is 1 in 4.4 due N 52° E. a roadway AB driven due S 68° E with plan length of 180 meters has met a down throw fault at B with a vertical throw of 30 meter an hade of 45°. Assuming the fault to be at right angles to the true dip. Calculate the length of the shortest drift to be drive from A to win the coal on the other side of the fault.	07
	<b>(b)</b>	Explain correlation survey? Explain correlation by plumbing in two shaft.	07
Q.5	(a) (b)	What are legal requirements as to mine plan in India.  Write short note on Planimeter and its uses.  OR	07 07
Q.5	(a)	What is a vertical curve? Explain type of vertical curves?	07
	<b>(b)</b>	Write in short a method of magnetic correlation for a connecting the surface survey with the survey of u/g working of mine. What are the drawbacks of this method?	07

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