Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE – SEMESTER – V (NEW) EXAMINATION – WINTER 2015

Subject Code: 2152205 **Date:08/12/ 2015**

Subject Name: Advance Mine Surveying

Time:10:30am to 1:00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Describe in detail method of setting out simple curve when apex is accessible.	**07**
	(b)	What is vertical curve? Explain type of vertical curves?	**07**
Q.2	**(a)**	Define curve. Explain rankine method for setting out curves.	**07**
	(b)	Describe a method of correlation of surface and underground surveys when one vertical shaft is available.	**07**
		OR	
	(b)	Explain the elements of compound curve.	**07**
Q.3	**(a)**	Define GIS, GPS and remote sensing? Give application of GIS in surveying.	**07**
	(b)	Describe method of magnetic correlation for connecting the surface survey with the survey of underground workings of a mine.	**07**
		OR	
Q.3	**(a)**	Explain any one method of stope surveying which are used in metal mines.	**07**
	(b)	Explain Hanging compass and miner's dial with its applicability in mining and its method of working.	**07**
Q.4	**(a)**	Explain preparation and preservation of plans and sections.	**07**
	(b)	Describe Measurement for scale of vertical photographs.	**07**
		OR	
Q.4	**(a)**	Define photographic survey. Discuss the photograph versus maps.	**07**
	(b)	List out the methods of enlarging and reduction of plans. Explain Eidograph and Pantagraph with neat sketches.	**07**
Q.5	**(a)**	Explain correlation with gyro-theodolite with its uses and advantages.	**07**
	(b)	Bearing road AB and AC are respectively N 27^0 30' W and S 85^0 36' W. Inclination of road AB and AC are respectively Rising 1 in 7 and Rising 1 in 9. Calculate the direction and rate of full dip of the seam.	**07**
		OR	
Q.5	**(a)**	Discuss photograph v/s Map.	**07**
	(b)	The apparent dip of a lode, when measured in the direction S 35^0 W is 35^0 and when measured in the direction S 35^0 E is 47^0. Calculate the amount and direction of dip of the lode. Check your result graphically.	**07**

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