Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC SEM-II Examination-Dec-2011

Subject code: X20601 **Date: 22/12/2011**

Subject Name: Advance Surveying

Time: 10.30 am -1.00 pm **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)**	A tacheometer is set up at a station A and readings taken on a vertically held staff at B were 2.255, 2.605 and 2.955, the line of sight being at an inclination of $+9^0 26'$.Another observation on the vertically held staff at BM. gave readings 1.640,1.920,and 2.200, the inclination of line of sight $+2^0 10'$.Calulate the horizontal distance between A and B, and the elevation of B if RL of BM. Is 415.525m.The constants of instruments were 100 and 0.	**07**
	(b)	Enlist different Methods of Tacheometric Measurement And Explain any one of them	**07**
Q.2	**(a)**	Explain the Rankine's method of tangential angle for setting out simple circular curve	**07**
	(b)	Two straight lines intersect at chainage of 1200.50 m.and angle of deflection is 60^0.if the radius of curve is 500m determine the following (1)Tangent Distance(2)Length of curve(3)Length of long chord(4)Degree of curve(5)Apex Distance(6)Mid Ordinate	**07**
		OR	
	(b)	Give Classification of curves with neat sketches	**07**
Q.3	**(a)**	Enlist different equipments used for sounding and explain Lead line in detail.	**07**
	(b)	Explain the three point problem for plotting sounding	**07**
		OR	
Q.3	**(a)**	Write purposes of hydrographic surveying	**07**
	(b)	Explain the different components of simple circular curve with neat sketch.	**07**
Q.4	**(a)**	Define aerial and terrestrial photogrammetric surveying and explain the basic principle of terrestrial photogrammetry	**07**
	(b)	A vertical photograph was taken at an altitude of 1200 m above mean sea level. Determine the scale of photograph for terrain lying at elevation of 80 m and 300 m if the focal length of camera is 15 cm	**07**
		OR	
Q.4	**(a)**	Write a short note on Total station	**07**
	(b)	Explain the electro magnetic spectrum with neat sketch	**07**
Q.5	**(a)**	What are the different stages of Idealized Remote sensing system	**07**
	(b)	Explain the key components of GIS	**07**
		OR	
Q.5	**(a)**	Write a short note on local sidereal time	**07**
	(b)	Define the following terms (1)Azimuth (2)hour Angle(3)Celestial Sphere(4)Zenith and Nadir(5)Observer's meridian(6)visible horizon(7)vertical circle	**07**

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