Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Sem-I/II Examination June-July 2011

Subject code: 110004 **Subject Name: Elements of Civil Engineering**
Date: 25/06/11 Total Marks: 70 Time: 10:30 am to 1:00pm

Instructions:

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

Q.1	**(a)**	Explain role of civil engineer	**05**
	(b)	Explain fundamental principles of surveying	**05**
	(c)	Describe Hydrological cycle	**04**
Q.2	**(a)**	The details of observed bearings are mentioned below. find out the included angles and also correct the angles if needed to be corrected .	**07**

Line	FB	BB
AB	20^0 30'	200^0 00'
BC	110^0 00'	290^0 30'
CD	195^0 00'	15^0 00'
DE	286^0 30'	106^0 00'

	(b)	(i) Give difference between load bearing and framed structure (ii) enlist different types of floors	**07**

OR

	(b)	Give classification of different roads according to its position in national network of roads .	**07**
Q.3	**(a)**	Enlist and Explain the different types of benchmarks	**05**
	(b)	The following readings are taken on Continuously falling ground with staff of 4 m ; they are 0.400, 0.765, 1.270, 2.560, 3.220, 3.950, 0.390,1.690,3.500,0.800,1.920, 2.450,3.980 . Enter the readings in the page of level book and calculate the RLs of all the points if the first reading was taken on Benchmark of 100.000 m	**05**
	(c)	Explain the Application of Remote sensing	**04**

OR

Q.3	**(a)**	Explain the following principles of Building Planning (i) Roominess (ii) Orientation (iii) Privacy	**05**
	(b)	Give the Symbol for following material in section for Building Drawing (i) Brick (ii) Stone (iii) Earth (iv) wood (v) Steel section	**05**
	(c)	Draw the foundation sketch for the wall having thickness of 20 cm and 30 cm	**04**
Q.4	**(a)**	Explain the properties of Bricks	**05**
	(b)	Enlist different types of cement and explain ingredients of ordinary Portland cement	**05**
	(c)	Draw sketch of R.C. C. Slab with Beam	**04**

OR

Q.4	**(a)**	Explain different types of watershed development techniques	**05**
	(b)	Explain different modes of transportation and their Importance	**05**

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	(c)	Explain traffic planning and its importance	**04**
Q.5	**(a)**	Explain different types of Building loads	**05**
	(b)	The offset from boundary of an agricultural plot are taken as below at the interval of 20 m . Calculate the area between the base line and boundary by Simpsons rule and trapezoidal rule The offsets are 0.24, 0.89, 1.45, 2.56, 5.67, 8.76, 7.88, 4.56,3.66,2.5 and 1.35.	**05**
	(c)	Explain properties and uses of concrete	**04**

OR

Q.5	**(a)**	Explain the different types of water conveyance structures	**05**
	(b)	Enlist different types of doors and draw sketch of panelled door	**05**
	(c)	Describe (i) isogonic line (ii) Application of contour map	**04**

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