Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEMESTER 1st / 2nd (OLD) EXAMINATION WINTER 2016

Subject Code: 110004 **Date: 28/01/2017**

Subject Name: Elements of civil engineering

Time:10:30 AM TO 1:00 PM **Total Marks: 70**

Instructions:

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

Q.1	**(a)**	Differentiate between plane surveying and geodetic surveying.	**07**
	(b)	What is ranging? Explain direct ranging with a neat sketch.	**07**
Q.2	**(a)**	Differentiate between prismatic compass and surveyors compass.	**07**
	(b)	The consecutive readings were taken with a level and a 4 m staff on a continuously sloping ground line AB. The staff readings are 0.685, 0.890, 1.850, 2.450, 3.250 and 3.750. The reduced level of station A is 100.00 m. Calculate the reduced levels at all other points where the levelling staff is placed by HI method. Tabulate the results and apply usual checks.	**07**
Q.3	**(a)**	State the applications of contour map.	**07**
	(b)	Discuss the qualities of a good timber.	**07**
Q.4	**(a)**	Draw a neat sketch of a 30 cm thick wall section through door showing all building components.	**07**
	(b)	Explain in detail suggestions for good orientation of building.	**07**
Q.5	**(a)**	Explain with neat sketch hydrological cycle.	**07**
	(b)	State the benefits of rain water harvesting.	**07**
Q.6	**(a)**	State the advantages and disadvantages of railway transport.	**07**
	(b)	Write a short note on traffic control devices.	**07**
Q.7	**(a)**	Explain the key role of civil engineer to the society.	**07**
	(b)	State the objectives and applications of geographic information system.	**07**

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