

GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER– 1st / 2nd • EXAMINATION – SUMMER 2016

Subject Code: 110004**Date:06/06/2015****Subject Name: Elements of Civil Engineering****Time:02:30 PM to 05:00 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) What is the role of civil engineer in society ? **07**
 (b) Define plan and map. Describe diagonal scale with sketch. **07**
- Q.2** (a) Define (1) Cumulative error (2) Line of sight (3) Magnetic declination **07**
 (4) Hypotenusal allowance (5) Bench mark (6) Hydrology
 (7) Contour interval
 (b) Calculate interior angles for the following bearings. Draw the traverse. **07**
- | Line | Fore Bearing |
|------|--------------|
| AB | 70° 30′ |
| BC | 132° 00′ |
| CD | 56° 00′ |
| DE | 215° 30′ |
| EA | 310° 00′ |
- Q.3** (a) Differentiate between Height of Instrument method and R.F. method. **07**
 (b) State various characteristics of contours in details. **07**
- Q.4** (a) Give introduction of GIS, GPS and Remote sensing in brief. **07**
 (b) What are the qualities of good timbers ? **07**
- Q.5** (a) Draw a detailed plan of one BHK residential building without scale. **07**
 (b) Explain technical terms used in stair with a neat sketch. **07**
- Q.6** (a) Describe various hydraulic structures used to store water. **07**
 (b) What is role of transportation in national development of India ? **07**
- Q.7** (a) Explain planimeter with sketch. **07**
 (b) A 20 m chain was found to be 10 cm too long after chaining a distance of 1500 m. It was found to be 18 cm too long at the end of day's work after chaining a total distance of 3900 m. find true distance if chain was correct before commencement of work. **07**
