

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Architecture – SEMESTER - III • EXAMINATION – WINTER 2015

Subject Code: 3336203**Date: 17/12/ 2015****Subject Name: Surveying and Levelling****Time: 10:30 AM TO 12:30 PM****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1 (a)** Explain the following terms: (Any five) **05**
1. Surveying
 2. Levelling
 3. Fore bearing and back bearing
 4. Bench Mark
 5. Height of Instrument (H.I.)
 6. Contour
 7. Contour Interval

- (b)** Explain in brief: Classification of Survey. **05**

- Q.2** List out various instruments used in chain surveying. Explain Chain with figure. **10**

OR

- List out the instruments used for setting out right angles & explain cross staff with neat sketch. **10**

- Q.3 (a)** The following staff readings were observed successively with a level, the instrument was shifted after third, sixth and eighth readings: 2.215, 1.615, 0.985, 2.090, 2.765, 1.365, 0.605, 1.995, 1.055, 2.785 m. Calculate the Reduced Level (R.L.) of all the points by Rise and Fall method if the R.L. of the first point was 415.885 m. **08**

- (b)** What is local attraction? **02**

- Q.4 (a)** The following fore bearings were observed with a compass. Calculate the interior angles and apply usual check. **05**

<u>Line</u>	<u>Fore bearings</u>
AB	85° 30'
BC	133° 00'
CD	225° 30'
DA	308° 00'

- (b)** Describe with the necessary sketches, the characteristics of contours. **05**

OR

- (b)** Explain with sketches, the uses of contour maps. **05**

- Q.5 (a)** Explain the following methods of computation of area. **05**
- (i) Trapezoidal rule (ii) Simpson's rule

- (b) Explain the procedure of setting out of building foundation. **05**
- OR**
- (b) Explain the application of remote sensing. **05**
