BAR-056

BACHELOR OF ARCHITECTURE (B.Arch.)

Term-End Examination

June, 2016

BAR-056 : TOPOGRAPHIC SYSTEMS

Time : 3 hours   *Maximum Marks : 70*

Note : *Attempt any five questions. All questions are of equal marks. Use of calculator is permitted.*

1. (a) What are different types of errors ? Illustrate   7
        your answer for the case of linear
        measurements with a tape.

   (b) What are the characteristics of contours ?   7
        Explain with neat sketches.

2. (a) What is total station ? What are the   7
        accessories provided in it ? Write its
        advantages.

   (b) A 20 m chain was found to be 15 cm too   7
        long after chaining a distance of 1600 m. It
        was found to be 30 cm too long at the end
        of day's work after chaining a total distance
        of 3200 m. Find the correct distance of the
        chain was correct before the
        commencement of work.

3. (a) Discuss temporary adjustments of a   7
        surveyor's compass.

   (b) A line AB was drawn to have a magnetic   7
        bearing of 26°30' in an old map when the
        declination was 2°30'E. Determine the
        magnetic bearing of the line of the present
        declination is 5°30'W.

4. (a) Compare height of instrument method with rise and fall method. Which one is more accurate ?   7

   (b) The following readings were taken during reciprocal levelling to find the difference in elevation between two points. Find the true difference in elevation between them. If the RL of P is 125·945 m, find RL of Q.   7

Instrument at	P	Q
Staff at P	1.445	1.965
Staff at Q	1.625	2.015

5. (a) What is two point problem ? Describe the procedure in detail.   7

   (b) What are the various adjustments of a plane table ?   7

6. (a) What is the difference between a compass traverse and a theodolite traverse ?   7

   (b) Explain Bowditch rule for traverse balancing.   7

7. (a) If the sensitivity of the bubble tube of a level is 30" of arc per division determine the distance of a point at which the combined curvature and refraction correction become numerically equal to the error induced by dislevelment of one division of the level tube.   7

   (b) Discuss the uses of contour maps.   7

8. Write short notes on **any four** of the following :

   (a) Location of contour gradient   3½x4=14
   (b) Principles of surveying
   (c) Tape corrections
   (d) Designation of bearings
   (e) Balancing of angles of the traverse