

CEU403

CT2

Summer 2017 17.3.2017

Q.1 Explain the adjustment of traverse by Bowditch's rule. (3M)

OR

Q.1 Explain reconnaissance survey. (3M)

Q.2 What are the advantages and disadvantages of plane table survey? (3M)

Q.3 Explain different methods of plane table survey and methods of orientation in plane table survey. (3M)

OR

Q.3 Explain Resection with any one method with illustration. (3M)

Q.4 Data from a differential leveling have been found in the order of B.S., F.S.....AND no any IS etc.with chainages @10m starting with the initial reading on B.M. (elevation 150.485 m) are as follows : 1.205, 1.860, 0.125, 1.915, 0.395, 2.615, 0.880, 1.760, 1.960, 0.920, 2.595, 0.915, 2.255, 0.515, 2.305, 1.170. The final reading closes on B.M. Put the data in a complete field note form and carry out reduction of level by Rise and Fall method. Perform check. All units are in meters. (6M)

OR

Q.4 What is Height of instrument method? Apply H.I. method on the following readings (with chainages @10m) 1.002, 1.342, 1.112, 1.119, 1.334, 1.222, 1.111, 1.333, 1.254, 1.540, 1.667, 1.343, 1.323, 1.219, 1.255. Where the instrument is shifted on 8th and 12th readings with work starting on BM 555m. (6M)

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$$v = [w + (c/s_i) + (y_p) \times f_y / s_{f+a}]$$

**C.T. No: 02    Sub: Surveying (CEU403)    Date: 06/03/18    Time: 1 hr.    Max. Marks: 15**

**Q. No. 1: Solve**

R.L of a factory floor is 100 m. Staff reading on floor is 1.550 m and the staff reading when staff is held inverted with bottom touching the tie beam of the roof truss is 4.160 m. Find the height and R.L of the tie beam above the floor.

$$C_a = [(1-P)/P] \times f_a \times (S \cos I_a)$$

**Q. No. 2: Solve**

Calculate the R.L at point A and B, Bm = 63.12m at <sup>HI</sup> starting P  
Reading on peg (P) on ground = 1.034 m., Reading on inverted staff touching bottom side of chajja (A) = 2.232 m., Change of instrument., Reading on inverted staff touching bottom side of chajja (A) = 2.100 m., Reading on inverted staff on bottom of cornice (B) = 4.124 m. (05)

$$C_{corrected} = \frac{C}{\cos I_a}$$

**Q. No. 3: Explain with neat sketch orientation methods in plane table surveying.** (03)

**OR**

Explain step by step procedure of setting up plane table over a station

**Q.No.4: Complete the following sentences with correct answer:** (02)

- The operation of leveling from any BM to the starting point of any project is known as.....
- In compass traversing, the angular error of closure should not exceed.....  $\frac{1}{5} \sqrt{N}$ .....
- In compass traversing, the value of relative closing error should not exceed.....  $\frac{1}{600}$ .....
- In leveling, GTS stands for.....