College of Engineering, Pune

END SEMESTER EXAM Nov/Dec 2012-13

Year T.Y. (B.Tech)

CE 302 SURVEYING- II

Civil

Day & Date- Monday 26/11 /2012 Max. Marks- 50

Timing- 2 pm - 5 pm Duration – 3 Hrs.

Instructions:

1. All questions are compulsory
2. Use of non-programmable calculator is allowed
3. Mobile phones are strictly prohibited in the Exam Room
4. Assume suitable data if necessary

Q1 A Explain following methods of locating soundings: (04)

i) Location by two angles from boat

ii) Location by range and one angle from shore

B In the course of a hydrographical survey, an observer takes the sextant angles APB and BPC subtended at the boat P by the points A, B and C on the shore, the points B and P being on the opposite sides of AC. The angles APB and BPC are found to be $36^{o}24'$ and $48^{0}12'$ respectively. The length of AB and BC are 984m and 1339.5m respectively, the angle ABC is $142^{0}36'$. Determine the distance PA, PB and PC. (04)

C Enlist different sounding equipments and explain fathometer in short. State advantages and disadvantages of using fathometer. (02)

Q 2 A Define the following terms (02)

i. Relief Displacement

ii. Sounding

iii. Spherical axis

iv. Satellite station

v.

B Classify different electronic distance measuring instruments. State functions of EDM. (04)

C Explain with neat sketches, float gauge and weight gauge used for measurement of tides. (04)

Q 3A Derive an expression for reduction to centre for a satellite station, if the satellite station (S) lies near true station B but inside the triangle ABC and to the north of B. (05)

B Explain the different processes that the radiation undergoes as it passes through the atmosphere. (05)

Q4 A Explain the reflectance curve for vegetation. (05)

B What is the difference between ideal remote sensing and real remote sensing systems. (05)

Q5. Explain the following (Any five) (10)

i) Station pointer
ii) GPS
iii) Flight planning
iv) EDM
v) Total station and its uses
vi) Bilby tower