Total No. of Questions : 6]

SEAT No. :

P72

[Total No. of Pages : 2

APR. -16/TE/Insem. - 1
T.E. (Civil)
ADVANCE SURVEYING
(2012 Course) (Semester - II)

Time : 1Hours]

[Max. Marks :30

Instructions to the candidates:

1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q6.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
5) *Assume suitable data, if necessary.*

Q1) a) Elevations of two triangulation stations. A and B, 106 km apart are 131 m and 434 m respectively. A peak C 80 km from station A has an elevation of 221-50 m. Ascertain it A is visible from B or not. Also find the minimum height of Scaffolding at B, so that the line of sight has a minimum 3m clearance any where. **[6]**

b) Explain with neat sketches GPS segment. **[4]**

OR

Q2) a) Explain in brief classification of triangulation system. **[5]**

b) What are different types of error in GPS observations and explain any one of them. **[5]**

Q3) a) Define tide and enlist the different types of tidal gauses. **[5]**

b) What is meant by sounding? Enumerate different instruments required for sounding and explain echosounding. **[5]**

OR

Q4) a) Define Hydrographic surveying and enlist various objectives of hydrographic surveying. **[4]**

b) Describe briefly how the soundings are located by two angles from the shore. **[6]**

P.T.O.

Q5) a) What do you understand by setting out works? What important factors to be considered while setting out. **[4]**

b) Two triangulation stations A and B are 2800 m apart. Angle of elevation from A to B was 1° 28'32". The height of the instrument was 1.38m and the signal was 2.48m high. If the reduced level of station A was 125m and the coefficient of refraction was 0.07. The redius of earth is 6372 km. Find RL of B. **[6]**

OR

Q6) a) Derive an equation to determine difference in elevation between two points having great distance between them and the observed vertical angle is an angle of elevation. **[6]**

b) Explain with heat sketch setting out of bridge. **[4]**

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