Total No. of Questions : 6]

SEAT No. :

P1431

[Total No. of Pages : 2

TE/Insem/APR-101
T.E. (Civil) (Semester - II)
ADVANCED SURVEYING
(2015 Pattern)

Time : 1 Hour] *[Max. Marks : 30*

Instructions to the candidates :

1) ***Answer Q.No. 1 or Q. No. 2, Q.No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6.***
2) ***Neat diagrams must be drawn whenever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Two stations A & B are 100 km apart. The elevation of A is 185 m and that of B is 885 m. In the line of sight between A & B, there are two intervening high points C & D. C is 42 km from A and D is 81 km from A. The elevation of peaks C & D are 318 m and 750 m. Check whether the line of sight from A to B clears the peak with a minimum clearance of 3 m above ground level. Determine the height of the signal at B for intervisibility. **[6]**

b) Enlist and explain types of errors in space based positioning systems.**[4]**

OR

Q2) a) The altitude of two stations 72 km apart are 372 m and 458 m, respectively. The intervening ground has a uniform elevation of 328 m. Find the height of the signal required at B if the line of sight has to pass at least 3 m above the ground at all points. **[6]**

b) Explain positioning methods used in Space Based Positioning System.**[4]**

Q3) a) During a sounding fieldwork, A, B, and C were stations on the shore. P was sounding station. The angles measured were angle APB = 32°46' and BPC = 41°24'. The three shore stations are located by traversing. AB = 596 m, BC = 678 m, and angle ABC = 132°52'. Find location of P by calculating distances PA, PB, and PC, if P is on the opposite side of line AC. **[6]**

b) Enlist the methods of locating sounding and explain any one in detail.**[4]**

P.T.O.

OR

Q4) a) Derive the analytical solution of three point problem. **[6]**

b) What is hydrographic surveying? Explain the objectives of hydrographic surveying. **[4]**

Q5) a) Explain the elements of visual image interpretation. **[5]**

b) Explain raster and vector data used in GIS. **[5]**

OR

Q6) a) Write a note on Geostationary and Sun-Synchronous Satellites. **[5]**

b) What is GIS? Explain various applications of GIS. **[5]**

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