S - 743

Total No. of Pages :3

Seat No.	

S.E. (Civil) (Semester - IV) (Revised) Examination, Dec. - 2013

SURVEYING - II

Sub. Code :43587

Day and Date : Wednesday, 11- 12 - 2013 **Total Marks : 100**

Time :2.30 p.m. to 5.30 p.m.

Instructions : 1) **Solve any three questions from each section.**
2) **Figures to the right indicate full marks.**
3) **Assume any additional data if required.**

SECTION - I

Q1) a) Explain the Various methods of finding tachometric constant. **[5]**

b) Describe briefly the construction and working of self Reduction Techometer. **[6]**

c) The Vertical angles to Vanes fixed at 1m and 3m above the foot of the staff held vertically at a station A were $+2^{0}30'$ and $+5^{0}48'$ respectively. Find the horizontal distance and the reduced level of A; if the height of the instrument was determined from observation on to a bench mark is 438.556 m above datum. **[6]**

Q2) a) What is ment by a satellite station and reduction to centre. **[6]**

b) What is base line in triangulation? How it is measured? Explain any one method in detail. **[6]**

c) Explain the use of field astronomy in civil Engineering. **[5]**

Q3) a) What is a spherical triangle? Discuss it's properties. **[5]**

b) Explain the following terms with the help of neat sketch. **[6]**

i) Prime Vertical.

ii) Parallel of latitude.

iii) Celestial horizon.

c) How would you locate polar is in clear sky? Describe The Procedure. **[5]**

P.T.O.

Q4) Write short notes on any four. **[16]**

a) Reduction of stadia notes.

b) Phase of Signal.

c) Weighted observations.

d) Distomat.

e) Spherical excess.

SECTION-II

Q5) a) How the curves are designated? Explain different Elements of curves and their relationship. **[7]**

b) Two straights, meeting at chainage 976.90m at intersection angle 22.9566^0 are to be connected by a simple curve of radius 202.22m. Calculate data necessary using theodolite of 20" leastcount by method of tangential angle. Take Peg interval 20m. **[10]**

Q6) a) Explain in detail Flight planning for Aerial photography. **[7]**

b) Two points A and B having elevations 600m and 400m respectively above datum appear on the vertical photograph having focal length of 200mm and flying altitude of 3000m above datum. Their corrected photographic coordinates are as follows.

Point	photographic coordinates	
	x mm	y mm
a	+ 25.5	+ 12.6
b	- 18.2	+ 35.5

Determine the length of ground line AB. **[10]**

Q7) a) Explain classification & principle of Remote Sensing. **[8]**

b) Explain Electromagnetic energy & its intraction with matter. **[8]**

Q8) Write short notes on any three: **[16]**

a) Stereoscopic Vision.

b) Horizontal & Vertical position of point from photographic measurement in terrestrial photogrammetry.

c) Length of Vertical Curve and Tangent Correction.

d) G.I.S. Applications to Civil Engineering.

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