

Seat
No.

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BAI1307

Surveying - II (New) (1080)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any two** questions from each unit.
5. Assume additional suitable data, if necessary.
6. Figures to the right indicate full marks.
7. Use of non - programmable calculator is allowed.
8. Answers to all the questions should be written in the same answer book.

UNIT - I

1. a) The altitude of two proposed triangulation stations A and C 100 km apart are 200m and 950m above mean seal level respectively. The heights of two raised top B and D on profile between A and C are 280m and 640m respectively. The distance AB and AD being 30 km and 75km. Ascertain if A and C are intervisible and if necessary determine the suitable height of scaffolding at C, given that A is ground station. The line of sight must be clear from the ground by at least 3m. 10
- b) i) What are the points considered while selecting site for base line ? 5
ii) Explain in detail any two corrections to be applied to the base line measurement. 5
- c) Explain 'phase of signal'. How it is corrected when observations are made on bright portion for cylindrical signal ? 10

UNIT - II

2. a) Following are the direct measurements of the base line.
5564.28m, 5564.34m, 5564.05m, 5564.25m, 5564.22m, 5563.94m.
Find the most probable value of the length of base line and its probable error. 10

- b) i) Explain Delambre's method of solution of spherical triangle. 5
- ii) State any five laws of weights. 5
- c) Explain clearly the procedure of adjustment of a Geodetic quadrilateral by approximate method. 10

UNIT - III

3. a) i) A vertical photograph was taken at an altitude of 1500m. above mean sea level. Determine the scale of the photograph for terrain lying at an elevation of 120m. The focal length of camera is 20 cm. 5
- ii) What is flight planning ? Explain in detail. 5
- b) Write short notes on the following.
- i) Mirror stereoscope. 5
- ii) Relief displacement. 5
- c) i) Explain about parallax bar and its importance in aerial photogrammetry. 5
- ii) Compare map and aerial photograph. 5

UNIT - IV

4. a) i) State applications of remote sensing to Civil Engineering. 5
- ii) Explain the basic principles of remote sensing. 5
- b) Explain classification of sensors state their uses in remote sensing. 10
- c) Explain in detail various platforms used in remote sensing. 10

UNIT - V

5. a) i) Write in detail about nautical sextant. 5
- ii) Describe in short tunnel survey. 5
- b) What is E.D.M ? What is its working principle. State the applications of E.D.M. 10
- c) i) Discuss special features of mine surveying. 5
- ii) What is sounding ? What are the objects of taking soundings. 5
