

NIL

SE CE .
SUY-1

12.12.14

(OLD COURSE)

QP Code : 12334

(3 Hours)

Total Marks : 100

- N. B. :** (1) Question No.1 is **compulsory**
(2) Attempt any **four** questions out of remaining questions.
(3) Illustrate answers with neat sketches wherever required.
(4) Attempt subquestions in order.

1. Attempt any **four** :- 20
- (a) Explain principles of surveying with suitable example.
 - (b) Explain with neat sketch dip of magnetic needle.
 - (c) Highlights the characteristics of contour.
 - (d) Difference between trapezoidal and Simpson's rule for determination of area.
 - (e) Explain method of measuring deflection angle using theodolite.
2. (a) Explain the obstacles in chaining 6
(b) Explain reciprocal Ranging 6
(c) A line was measured by a 20m chain which was accurate before starting the day's work. After chaining 900m, the chain was to be 6 cm too long. After a total distance of 1575m the chain was found to be 14cm too long. find the true distance of the line. 8

3. (a) What is meant by local attraction? How is it detected and explain the method of correcting the bearing from local attraction. 8
(b) The following bearings were observed a compass traverse. 12

Line	AB	BC	CD	DE	EA
F.B	305°00'	75°30'	115°30'	165°30'	225°00'
B.B	125°30'	254°30'	297°00'	345°30'	44°00'

Calculate corrected bearing and included angle of the travels.

4. (a) Explain the various types of Bench marks in levelling. 6
(b) Differentiate between H.I. and Rise and Fall method. 6
(c) The following consecutive readings were taken with a dumpy level along a chain line at common interval of 15m. The instrument was shifted after fourth and ninth readings. The first reading was taken at a chainage of 0m where the RL is 112.620. Find the RL of all points and apply usual check.
3.150, 2.245, 1.125, 0.860, 3.125, 2.760, 1.835,
1.470 1.965 1.225 2.390 and 3.035m 8
5. (a) State the fundamental lines of transit theodolite and explain the temporary adjustment of transit theodolite. 10
(b) Calculate latitudes, departures and closing error for the following traverse and adjust using Bowditch Rule. 10

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Line	length	W.C.B
AB	89.31	45°10'
BC	219.76	72°05'
CD	151.18	161°52'
DE	159.10	228°43'
EA	232.26	300°42'

6. (a) Define two point problem in a plane table survey and explain the method of solving it on the field. 10
- (b) Enlist are the different method of plane table survey and describe the various method with neat sketch. 10
7. (a) The perpendicular offset taken at 10m intervals form a survey line to an irregular boundary form a survey line to an irregular boundary are 2.25, 3.85, 4.50, 6.80, 5.20, 7.35, 8.90, 8.30 and 5.45m. Determine the area between survey line and irregular boundry by (i) Trapeziodal Rule (ii) Simpson's Rule. 10
- (b) Write short note on "Area of zero circle" 4
- (c) Explain the procedure of mesuring of horizontal angle by the method of repetition. 6