Q.P. Code : 537502

(3 Hours)   [Total Marks : 80

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **three** from the remaining **five** questions.
(3) Attempt **sub-questions** in order.
(4) **Figures** to the **right** indicate **full** marks.

1. Attempt any five. *four*
   (a) Explain fly levelling with its suitability.
   (b) Direct vernier, Retrograde vernier - Explain.
   (c) How will you measure deflection angle of a survey line using theodolite
   (d) Difference between Prismatic & surveyor's compass.
   (e) Area of Zero circle.

2. (a) Explain how you would setup a plane table at a station.   4
   (b) The following bearing were observed on a traverse.   10

Line	AB	BC	CD	DA
FB	80° 45'	130° 30'	240°15'	290°30'
BB	260°00'	311°35'	60°15'	110°10'

   Make corrections for local attraction and declination of 1°.30'and calculate
   true fore bearing.
   (c) At the end of survey of a field a 30m chain was found to be 10cm too long.   6
   The area of the plan drawn with the measurements taken with its chain is
   found to be 125cm². If the scale of the plan is 1cm = 10m, what is the true area
   of the field. Assume that the chain was exact 30m of the commencement of
   the work.

3. (a) The following are the lengths and bearing in a traverse ABCD   10

Line	AB	BC	CD
Length (m)	124	168	97
Bearing	32⁰	168⁰	44⁰

   (b) How is the closing error of the traverse adjusted graphically.   6
   (c) How will you use line ranger in the field. Draw a neat sketch.   4

[TURN OVER

4. (a) It was required to ascetain the elevation of two points P & Q and line of   10
levels was runs from P to Q. The levelling was then continued to a bench
mark of 83.500 the reading obtained being as shown as below. Obtain RL of
P & Q.

BS	IS	FS	RL	Remarks
1.622				P
1.874		0.354		
2.032		1.780		
	2.362			Q
0.984		1.122		
1.900		2.824		BM

(b) Explain interpolation of contours. What are the methods available? Explain   6
any one method in detail.

(c) Discuss the importance of reconnaissance in surveying.   4

5. (a) Explain Radiation and Intersection method of plane table survey with neat   8
sketch.

(b) Describe temporary adjustment of theodolite.   6

(c) Explain briefly the instruments used in setting out perpendicular offsets in   6
chian surveying.

6. (a) The following notes refer to the reciprocal levels with one level.   8

Insturment at	Staff Reading m A	B	Remark Distance between
A	1.150	2.540	A and B = 1250m
B	0.965	2.410	and RL of A = 650.50m

Find   (i)   True RL of B
(ii)   Combined correction for curvature & refraction

(b) Obstacles in chaining   7

(c) Balancing fore sight and backsight   5

Course: SE (all Branches)

QP Code 537502 (2nd query)

Correction

QNo. 2a. Make corrections for local attraction and declination of 1ded 30 minutes EAST

Date and Time 03/06/2016 04:55PM

Course: SE (all Branches)

QP Code 537502

Correction

Q NO.1. Attempt any FOUR instead of FIVE

Q No,3a. Find length and bearing of DA.

Date and Time 03/06/2016 04:48 PM