Total No. of Questions—**8**] [Total No. of Printed Pages—**2**

Seat No.	

[5352]-504

S.E. (Civil) (I Sem.) EXAMINATION, 2018
SURVEYING
(2015 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. :— (*i*) Answer Q. No. **1** *or* Q. No. **2**, Q. No. **3** *or* Q. No. **4**, Q. No. **5** *or* Q. No. **6**, Q. No. **7** *or* Q. No. **8**.
(*ii*) Neat sketches must be drawn wherever necessary.
(*iii*) Figures to the right indicate full marks.
(*iv*) Assume suitable data, if necessary.
(*v*) Use of electronic pocket calculator is allowed in the examination.
(*vi*) Use of cell phone is prohibited in the examination hall.

Q.1. (a) Enlist temporary adjustment of plane table surveying and explain Intersection method of plane table surveying with neat sketch . **(06)**

(b) The following records refers to an operation involving reciprocal leveling

Instrument At	Staff reading on		Remarks
	A	B	
A	2.265	3.790	Distance AB = 1200.00 m.
B	1.015	2.715	RL of A = 550.500 m.

Find:-1) The true Reduced Level of B.
2) The combined correction for curvature and Refraction.
3) The collimation error.
4) Whether the line of collimation is Inclined upward or Downward. **(06)**

OR

Q. 2. (a) The following fore and back bearings were observed in traversing with a compass in place were Local Attraction was suspected. Find the corrected FB and BB of lines using included angles. **(06)**

Line	AB	BC	CD	DE	EA
FB	$158^0 30'$	62^0	342^0	281^0	$210^0 30'$
BB	339^0	242^0	163^0	$101^0 30'$	30^0

(b) Enlist the 3 Permanent adjustment of level and explain two peg method to make the line of collimation parallel to axis of the bubble tube. **(06)**

Q. 3. a) State and explain the fundamental axes of Theodolite. **(04)**

P.T.O.

b) The following observations were made on vertically held staff with a Tachometer fitted with an anallactic lens. Find the distance AB and RLs of A & B. **(08)**

Inst. Station	Height of Instrument	Staff Station	WCB	Vertical Angle	Hair Readings	Remarks
M	1.750	A	65^0 30'	+ 9^0 20'	2.350,3.150,3.950	R.L. of M = 173.250 m
		B	128^0 15'	+ 4^0 20'	1.750,2.250,2.750	

OR

Q. 4. a) What is Total station, explain Area measurement function with total station. **(06)**

b) Find the area of the closed traverse with the help of following data, use Independent co-ordinate method: **(06)**

Side	Latitude	Departure
AB	+225.5	+120.5
BC	-245.0	+210.00
CD	-150.5	-110.5
DA	+170.0	-220.0

Q.5.a) Define Curve. Classify the different types of curves with sketches. **(06)**

(b) Two tangent intersects at chainage of 1750 m. The angle of intersection is 152^0, calculate all data necessary for setting out curve of 246 m by the deflection angle method. The peg interval is considered as 25 m. Prepare a setting out table if the least count of vernier is 20". Apply check also. **(07)**

OR

Q. 6. a) Explain the method of setting out curve by offset from Long Chord. **(06)**

(b) Two tangent intersect at a chainage of 1000m, the deflection angle being 30^0 calculate all the necessary data for setting out circular curve of radius 200 m by the method of offset from chord produced taking peg interval of 20 m. **(07)**

Q. 7. a) Explain with sketch if needed: **(4+3 =07)**

i) Significance of horizontal and vertical control in building construction

ii) Explain how the setting of coordinates with global positioning System is done

b) Write a short note on BeiDou (SBPS) with any four points. **(06)**

OR

Q. 8. a) Describe the procedure of setting out Canal line with sketch. **(06)**

b) Explain three segment of SBPS (Space based Position System) and Explain Galileo System **(07)**