

Paper Id: **181016**Roll No:

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B.ARCH.
(SEM I) THEORY EXAMINATION 2019-20
SURVEYING AND LEVELLING

Time: 3 Hours**Total Marks: 50****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION -A****Q1. Attempt all questions. All questions carry equal marks. 2x5=10**

- (a) Define Horizontal Equivalent.
- (b) What are the different types of Benchmarks.
- (c) What is Local Attraction.
- (d) Write Short note on Magnetic Bearing.
- (e) What are the accessories used in Plane Table Surveying.

SECTION -B**Q2. Attempt any three part of the following. 3x5 =15**

- (a) What are the various methods of resection? Explain resection by back sighting.
- (b) Give in Tabular Form, the difference between Prismatic Compass and Surveyor's Compass.
- (c) Explain the Principle of Photogrammetry.
- (d) The following are bearings taken on a closed compass traverse:

Line	Fore Bearing	Back Bearing
AB	80° 10'	259° 0'
BC	120° 20'	301° 50'
CD	170° 50'	350° 50'
DE	230° 10'	49° 30'
EA	310° 20'	130° 15'

Calculate the interior and correct them for observational errors. Assuming the observed bearing of the line CD to be correct.

Q3. Attempt any one part of the following. 1x5=5

- (a) Explain the Working Principal of the Total Station.
- (b) State 3 Point Problem and its use.

Q4. Attempt any one part of the following. 1x5=5

- (a) What are Sources of Errors in Levelling.
- (b) Explain the instrument used in Chain Surveying.

Q5. Attempt any one part of the following. 1x5=5

- (a) What are the factors involved in Selection of Station in Chain Surveying.
- (b) What are the sources of errors in compass surveying?

Q6. Attempt any one part of the following. 1x5=5

- (a) Explain clearly the measurement of horizontal and vertical angle using Theodolite.
- (b) Explain with the neat sketches, The uses of the contour Maps.

Q7. Attempt any one part of the following. 1x5=5

- (a) Explain Method of repetition for horizontal Angle Measurement.
- (b) It was required to ascertain the elevation of two points P and Q and a line of levels was run from P to Q. The levelling was then continued to a bench mark of 83.500, The readings obtained being shown below. Obtain the R.L. of P and Q.

B.S.	I.S.	F.S.	R.L.	Remarks
1.622				P
1.874		0.354		
2.032		1.780		
	2.362			Q
0.984		1.122		
1.906		2.824		
		2.036	83.500	B.M.