



ROLL NO:

PRESIDENCY UNIVERSITY, BENGALURU
SCHOOL OF ENGINEERING

Weightage: 20 %

Max Marks: 40

Max Time: 1 hr.

Monday, 24th September, 2018

TEST – 1

Odd Semester 2018-19

Course: **CIV 202 Surveying**

III Sem. Civil

Instruction:

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

Part A

(3 Q x 4 M = 12 Marks)

1. Differentiate between Geodetic survey and Plane survey.
2. List the classification of survey based on instruments used.
3. Define the following
 - a) Magnetic declination
 - b) Magnetic bearing
 - c) True meridian and
 - d) Isogonic Lines

Part B

(2 Q x 8 M = 16 Marks)

4. The following are the observed bearings of the lines of a traverse ABCDEA with a compass in a place where local attraction was suspected.

Line	Fore Bearings	Back Bearings
AB	191 ⁰ 45'	13 ⁰ 0'
BC	39 ⁰ 30'	222 ⁰ 30'
CD	22 ⁰ 15'	200 ⁰ 30'
DE	242 ⁰ 45'	62 ⁰ 45'
EA	330 ⁰ 15'	147 ⁰ 45'

Find the correct bearings of the lines.

5. A big pond obstructs the chain line 'AB'. A line 'AL' was measured on left of the chain line 'AB' for circumventing the obstacle. The length of 'AL' was 901m, similarly the line 'AM' was measured on the right of the chain line 'AB' whose length was 1100m, points M, B and L are in the same straight line. Lengths of the links 'BL' and 'BM' are 502m and 548m respectively. Draw the Sketch and find the distance AB.

Part C

(1 Q x 12 M = 12 Marks)

6. Define the terms Surveying and Map. Write the objectives of surveying and explain the classification of maps.



**PRESIDENCY UNIVERSITY,
BENGALURU**

SCHOOL OF ENGINEERING

TEST 2

Odd Semester: 2018-19

Course Code: CIV 202

Course Name: Surveying

Branch & Sem: CIV & III Sem

Date: 27 November 2018

Time: 1 Hour

Max Marks: 40

Weightage: 20%

Instructions:

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

Part A

Answer **all** the Questions. **Each** question carries **four** marks. (3x4=12)

1. Define: a) Change Point b) Parallax c) Level Surface d) Levelling.
2. Write the uses of theodolite.
3. Define: a) Transiting b) Swinging c) Line of Collimation d) Changing Face.

Part B

Answer **all** the Questions. **Each** question carries **eight** marks. (2x8=16)

4. In order to ascertain elevation of top Q of the signal on a hill, observations were made from two instrument stations P and R at a horizontal distance 100m apart, the stations P and R being in line with Q. The angles of elevation of Q at P and R were $28^{\circ}42'$ and $18^{\circ}6'$ respectively. The staff readings upon the BM of elevation 287.28 were respectively 2.870 and 3.750 when the instrument was at P and at R, the telescope being horizontal. Determine the elevation of the foot of the signal if the height of the signal above its base is 3m.

5. The following consecutive readings were taken with a dumpy level along a chain line at a common interval of 15 m. The first reading was at a chainage of 165 m where the RL is 98.085. The instrument was shifted after the fourth and ninth readings.
3.150, 2.245, 1.125, 0.860, 3.125, 2.760, 1.835, 1.470, 1.965, 1.225, 2.390 and 3.035 m.

Mark rules on a page of your notebook in the form of a level book page and enter on it the above readings and find the RL of all the points by Collimation system.

Part C

Answer the Question. Question carries **twelve** marks.

(1x12=12)

6. Define bench mark and list different types. Determine the gradient from a point A to a Point B from the following observations made with a tacheometer fitted with anallactic lens. The constant of the instrument was 100 and the staff was held vertically.

Inst. Station	Staff point	Bearing	Vertical angle	Staff readings
P	A	134 ⁰	+10 ⁰ 32'	1.360,1.915,2.470
	B	224 ⁰	+5 ⁰ 6'	1.065,1.885,2.705

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**PRESIDENCY UNIVERSITY
BENGALURU**

SCHOOL OF ENGINEERING

END TERM FINAL EXAMINATION

Odd Semester: 2018-19

Course Code: CIV 202

Course Name: Surveying

Programme & Sem: CIV & III Sem

Date: 27 December 2018

Time: 2 Hours

Max Marks: 80

Weightage: 40%

Instructions:

- (i) Read the question properly and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and Non-programmable calculators are permitted.

Part A

Answer **all** the Questions. **Each** question carries **five** marks.

(4Qx5M=20)

1. Write the uses of contour map.
2. Explain the orientation of plane table by backsighting.
3. Write a note on different types of alidade.
4. List the steps for setting up of a plane table over station.

Part B

Answer **all** the Questions. **Each** question carries **Ten** marks.

(4Qx10M=40)

5. Two tangents AB and BC intersect at a point B at chainage 150.5m. Calculate all the necessary data for setting out a circular curve of radius 100m and deflection angle 30° by the method of offsets from long chord.
6. Write the characteristics of contours.
7. Define GPS. With a neat diagram indicate the components of GPS.
8. The following perpendicular offsets were taken from a chain line to a hedge.

Chainage(m)	0	5.5	12.7	25.5	40.5
Offsets(m)	5.25	6.50	4.75	5.20	4.20

Calculate the area between the chain line and the hedge by the coordinate method.

Part C

Answer the Question. Question carries **twenty** marks.

(1Qx20M=20)

9. The following perpendicular offsets were taken from a chain line to a hedge.

Chainage(m)	0	15	30	45	60	70	80	100	120	140
Offsets(m)	7.6	8.5	10.7	12.8	10.6	9.5	8.3	7.9	6.4	4.4

Calculate the area between the survey line, the hedge and the end offsets by

- Trapezoidal rule
- Simpson's rule.