

B.Tech. SEM -IV (Civil) 2014 Course (CBCS) : SUMMER - 2019
SUBJECT: SURVEYING

Day : Saturday
Date : 25/05/2019

S-2019-2598

Time : 10.00 AM TO 01.00 PM
Max. Marks: 60.

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate full marks.
- 3) Draw neat labeled diagrams **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

Q.1 What is meant by closing error? Explain graphical method of adjustment of closing error? (10)

OR

Draw neat labeled sketch prismatic compass and state the functions of each part. (10)

Q.2 Explain how staff readings are entered in level field book with example. (10)

OR

Enumerate the stepwise procedure of interpolation of contours by arithmetic method with a suitable example. (10)

Q.3 The table below gives length and the bearings of lines of traverse ABCDE. Calculate the latitude and departure of each line. (10)

Line	Length(m)	Bearing
AB	204.0	$87^{\circ} 30'$
BC	226.0	$20^{\circ} 20'$
CD	187.0	$280^{\circ} 00'$
DA	192.0	$210^{\circ} 30'$

OR

Is it possible to prolong a straight line without transiting a theodolite? Is yes How? (10)

Q.4 Give list of permanent adjustment of transit theodolite and state the object of each of the adjustment. (10)

OR

P.T.O.

Following observations were taken with a tacheometer on vertically held staff (10)
 Take multiplying constant 50 and additive constant 0.40 find reduced level of station Q.

Instrumentation station	Staff station	Vertical Angle	Staff readings	Remark
A	P	$-6^{\circ}30'$	3.6, 2.8, 1.9	Rl of P = 250.0 M
	Q	$-8^{\circ}30'$	1.8, 0.8, 0.15	

Q.5 Describe the method of setting out simple curve by using the method of offset from long chord (10)

OR

Calculate the necessary data for setting out a simple circular curve of 350m radius (10) to connect the two tangents intersecting at the chainage of 1238m, the deflection angle is 36° . Take the peg interval equal to 30m. Use Rankine method of deflection angle?

Q.6 What is meant by orientation? Write stepwise procedure of orientation by back-sighting. (10)

OR

Write procedure of temporary adjustment of plane table (10)

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