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	87^0 30
BC	226.0	20^0 20
CD	187.0	280^0 00
DA	192.0	210^0 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	$-6^0 30'$	3.6 , 2.8, 1.9	Rl of P = 250.0 M
	Q	$-8^0 30'$	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 to connect the two tangents intersecting at the chainage of 1238m, the deflection angle is 36^0. Take the peg interval equal to 30m. Use Rankine method of deflection angle? **(10)**

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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