

BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)
B.Tech.Sem - IV CIVIL :SUMMER- 2022
SUBJECT : SURVEYING

Day : Monday
Date : 20-06-2022

S-12712-2022

Time : 10:00 AM-01:00 PM
Max. Marks : 60

N.B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicates **FULL** marks.
- 3) Use of **CALCULATOR** is allowed.

- Q.1** A closed compass traverse ABCD was conducted round a lake and the bearings as show below were obtained. Determine which of the stations are affected by local attraction and give the values of corrected bearings. **(10)**

Line	AB	BC	CD	DE
FB	84 ⁰ 20'	117 ⁰ 20'	234 ⁰ 50'	316 ⁰ 00'
BB	266 ⁰ 00'	296 ⁰ 20'	54 ⁰ 50'	136 ⁰ 00'

OR

- Q.1** With neat sketch explain principle and working of electronic distance meter. **(10)**

- Q.2** Give difference between: **(10)**

- 1) GTS bench mark and permanent BM
- 2) Leveling staff and open cross staff
- 3) Simple levelling and compound levelling

OR

- Q.2** The following consecutive readings were taken with dumpy level and 4 m levelling staff on a continuously sloping ground at a common interval of 30m 3.820 on A, 3.125, 2.350, 1.580, 0.830, 3.500, 2.830, 2.010, 1.400, 0.550, 3.650, 2.650, 1.850, 0.965 on B. The Reduce level of A was 500m make up a level book page and apply usual check use rise and fall method. **(10)**

- Q.3** Following are the observation taken while running closed traverse by theodolite find corrected coordinates of points using Bowditch Rule. **(10)**

Line	Length in M	Bearing
AB	335	181 ⁰ 20'
BC	850	90 ⁰ 20'
CD	408	357 ⁰ 00'
DA	828	265 ⁰ 00'

OR

- Q.3** Explain the method of repetition to measure horizontal angle using transit theodolite and state its advantages. **(10)**

P.T.O

Q.4 State accessories of plane table and with neat sketch, state uses of each accessories. **(10)**

OR

Q.4 A tacheometer was set up at a station 'A' and the following readings were obtained on a staff held vertical. **(10)**

Instrument Station	Vertical angle	Staff at	Staff reading
A	$-6^{\circ} 30'$	BM	0.900, 1.160, 1.420
A	$-2^{\circ} 20'$	B	1.140, 1.230, 1.320

The constants of instrument were 100 and 0.1. Find the horizontal distance AB and RL of B, if R.L. of BM is 200.00m

Q.5 Two tangents AB and BC intercept at a point B at 150.5m chainage. Calculate all the necessary data for setting circular curve of 100m radius and deflection angle 30° by the method of offsets from the long cord. **(10)**

OR

Q.5 State the procedure of setting circular curve by Rankine's method of deflection angle in field. **(10)**

Q.6 Write in detail about construction survey and importance of modern equipment with example. **(10)**

OR

Q.6 Explain procedure for setting out building by using total station. **(10)**

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