

**B.Tech. SEM -IV (Civil ) 2014 Course (CBCS) : WINTER - 2018**

**SUBJECT: SURVEYING**

Day : Wednesday  
Date : 14/11/2018

**W-2018-2333**

Time : 02.30 PM TO 05.30 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 a)** What are WCB and RB system? How will you convert WCB into RB (05)

**b)** What is meant by declination explain with neat sketch (05)

**OR**

Following bearings were recorded while carrying out a closed compass traverse (10)

1. Draw a neat sketch of the traverse
2. Correct a the bearings affected by local attraction
3. Calculate the included angles and check for their sum

<b>Line</b>	<b>FB</b>	<b>BB</b>
PQ	53° 00	230° 00
QR	136° 00	315° 00
RS	240° 00	58° 00
SP	296° 00	123° 00

**Q.2** What are the temporary adjustment of dumpy level. (10)  
State the relation between the axes after temporary adjustment.

**OR**

During a fly leveling work of the staff reading were obtained at a regular interval at 25m the readings were as under (10)  
BS - 0.555, 0.995, 2.170, 2.355  
FS- 1.680, 1.355, 2.150, 3.455  
The work was begin with a point whose RL was known to be 250.00  
Determine the RLS of all the point. Apply usual check

**Q.3** Can a theodolite be used as dumpy level? If yes explain how. (10)

**OR**

Write step wise procedure of repetition method for measurement of horizontal angle using theodolite. Enlist the error eliminated (10)

**Q.4** Draw a Gale's traverse table and explain in detail (10)

**OR**

**P.T.O.**

A tacheometer was set up at a station P and the following readings were obtained (10)  
on a vertically held staff.

Instrumentation station	Staff station	Vertical Angle	Staff readings	Remark
P	BM	$-6^{\circ}$	1.2, 1.6, 1.9	Rl of BM = 500.0 M
	Q	$+12^{\circ}$	0.8, 1.5, 1.8	

- Q.5** Describe the method of setting out the curve by rankines method of deflection angle with neat sketch (10)

**OR**

Two roads meets at an angle of  $130^{\circ}$ . Calculate the data necessary for setting out the curve of 15 chain radius to connect the straight road if it is intended to set out the curve by chain and offset from the long chord the chain used is 30m (10)

- Q.6** List the accessories required in plane tabling and draw there sketch and state use of each (10)

**OR**

State the situation under which plane tabling is used, also state the merits and demerits of plane table survey (10)

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