1029

Code : 15CE-33T

Register Number | | | | | | | |

III Semester Diploma Examination, April/May-2017

SURVEYING – II

Time : 3 Hours] **[Max. Marks : 100**

PART – A

Answer any **six** questions each carries **5** marks.

1. Write the relation between fundamental lines of a theodolite. **5**
2. What is meant by Balancing the traverse and closing error ? **5**
3. What is trigonometrical levelling ? What are the practical applications of it ? **5**
4. What is Tacheometry ? List the advantages of Tacheometry. **5**
5. Define compound curve with a neat sketch and show it's elements. **5**
6. What are the objects of providing transition curve ? **5**
7. What are the basic principles of Remote Sensing ? **5**
8. Compare GIS with Auto-CAD. **5**
9. List the advantages of Total Station. **5**

PART – B

Answer any **seven** questions each carries **10** marks.

10. Write the procedure for measurement of deflection angle. **10**
11. Calculate the error of closure and adjust the following traverse by using transit rule. **10**

Line	Length in m	Bearing
PQ	130	S 88°E
QR	158	S 6°E
RS	145	S 40°W
ST	308	N 81°W
TP	337	N 48°E

12. Following are the details of a closed traverse. The length of AB and CD have been omitted.

Line	Length in m	Bearing
AB	?	33°45'
BC	300	86°23'
CD	?	169°23'
DE	450	243°54'
EA	268	317°30'

Determine the omitted quantities. **10**

13. Determine the elevation of the top of the chimney, from the following observations.

Inst. Station	Reading on BM	Angle of elevation	RL of BM
A	0.860	18°36'	420.500 m
B	1.220	10°12'	

Station A and B and the top of the chimney are in the same vertical plane. Distance between A and B is 50.00 m. **10**

14. A Tacheometer was setup at a station P and the following readings were obtained on a vertically held staff.

Inst. Station	Staff Point	Vertical Angle	Staff Reading	Remarks
P	BM	– 4°22'	1.050, 1.103, 1.156	RL of BM = 1958.3
	Q	+ 10° 0'	0.952, 1.055, 1.158	

Find the horizontal distance from P to Q and RL of Q.

Take K = 100, C = 0.1 **10**

15. Explain the procedure of setting out a simple curve by chord produced method. **10**

16. Tabulate the necessary data for setting out a circular curve with the following data :
Angle of intersection = 144°
Chainage of point of intersection = 1390 m
Radius of curve = 300 m
The curve is to be set out by offsets from chords produced with pegs at every 20 m of through chainage. **10**

17. Two straights BA and AC are intersected by a line EF. The angles BEF and EFC are 140° and 145° respectively. The radius of the first arc is 600 m and that of second arc is 400 m. Find the chainage of the tangent points and point of compound curvature. The chainage of intersection point A is 3415 m. **10**

18. Explain the procedure for coordinate measurements with total station. **10**

19. Explain the procedure for curve setting using Total Station. **10**