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Branch: Civil Engg.

Subject : Surveying-I

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple choice Questions. All questions are compulsory (10x1=10)

(Course Outcome/CO)

Q.1 In geodetic survey higher accuracy is achieved , if (CO-1)
a) Curvature of earth is ignored
b) Curvature of earth is taken in account
c) Angles between the curved lines are treated as plane angles
d) None of the above

Q.2 The main principle of surveying is to work from part to the whole (CO-1)
a) From whole to the part
b) From higher level to the lower level
c) From lower level to higher level

Q.3 The method of establishing intermediate points on a straight line between the two points is (CO-2)
a) Ranging b) Chaining
c) Offsetting d) None of the above

Q.4 The line normal to the plumb line is known as(CO-2)
a) Horizontal line b) Datum line
c) Level line d) Vertical line

Q.5 Instrument used for setting out perpendicular (CO-2)
a) Plump bob b) Cross-staff
c) Chain d) Ranging rods

Q.6 The horizontal angle between true meridian and magnetic meridian, is known as (CO-3)
a) Bearing b) Magnetic declination
c) Dip d) Convergence

Q.7 If the whole circle bearing of a line is 180^o, its reduced bearing is (CO-3)
a) S 0^o E b) S 0^o W
c) S d) N

Q.8 The rise and fall method of reduction of levels, provides a check on (CO-4)
a) Back sights b) Fore sights
c) Intermediate sights
d) All of the above

Q.9 A relatively fixed point of known elevation above datum, is called (CO-4)
a) Datum point b) Reduced level
c) Bench mark d) Reference point

Q.10 An imaginary line passing through the optical Centre of the object glass and the optical Centre of the eyepiece is known as (CO-4)
a) Axis of bubble tube b) Axis of telescope
c) Line of collimation d) None of the above

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Generally area less than_____are treated as plane. (CO-1)

Q.12 Sag in chain is_____source of error. (CO-2)

Q.13 A 30 metre chain have_____links. (CO-2)

Q.14 Define Prismatic compass. (CO-3)

Q.15 Define Bearing. (CO-3)

Q.16 The sum of the interior angles of a closed transverse is_____. (CO-3)

Q.17 Define Height of Instrument. (CO-4)

Q.18 Define Differential Levelling. (CO-4)

Q.19 Write three advantages of plane table surveying. (CO-5)

Q.20 Intersection method is used for locating the position_____ objects. (CO-5)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Define plane surveying and Geodetic surveying. (CO-1)

Q.22 Explain Chain Correction and its type. (CO-2)

Q.23 The length of survey line measured with 30 metre chain was found to be 270 m. Find the true length of line if the chain was 10 cm too long. (CO-2)

Q.24 The magnetic bearing of line AB is S 38° 30' W. What its true bearing if the declination is 4° 15' towards west. (CO-3)

Q.25 Convert the following reduce bearing to whole circle bearing (CO-3)

I. N55° 45'E III. S 55° 45'E V. N 89° 45'W

II. S 55° 45'E IV. N 55° 45'W

Q.26 Explain the temporary adjustment of dumpy level. (CO-4)

Q.27 Explain Reciprocal levelling (CO-4)

Q.28 Find the combined correction for curvature and refraction for a length of sight 450 m. (CO-4)

Q.29 Define Auto level and planimeter. (CO-4)

Q.30 Differentiate between Height of instrument method and Rise and Fall method of reduction of level. (CO-4)

Q.31 List five advantages and disadvantages of plane table surveying. (CO-4)

Q.32 What are the precautions to be taken in plane table surveying. (CO-5)

Q.33 What are the various method of orientating a plane table. (CO-5)

Q.34 Describe the various methods of plane tabling. Explain any one of them. (CO-5)

Q.35 Explain three point problem. (CO-5)

SECTION-D

Note: Long answer type questions. Attempt any two out of three questions. (2x10=20)

Q.36 The following bearings were observed for a closed traverse. Which station are affected by local attraction? Determine the correct bearings. Find the true bearings of the line if the declination was 3° E. (CO-)

Side	Fore bearing	Back bearing
AB	72° 15'	254° 0'
BC	105° 15'	284° 15'
CD	222° 45'	42° 45'
DA	305° 45'	155° 0'

Q.37 The staff reading recorded for a survey work are as follows. First reading was taken on a B.M whose R.L is 115.150. Find out the R.L's of all stations by Rise and Fall method. (CO-4)

Back Sight	Intermediate Sight	Fore Sight
1.765		
	1.230	
	1.445	
1.930		1.200
	1.665	
0.965		2.125
		1.545

Q.38 Name the various accessories of the plane table. What are their functions. (CO-5)

(**Note:** Course outcome/CO is for office use only)