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3rd Sem / Civil, Brick Tech, Constr, Mgmt, Highway Engg.
Subject:- Surveying - I

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 A metallic tape is made of (CO1)
a) Linen b) Cloth and Wires
c) Invar d) Steel

Q.2 The maximum tolerance in a 30m chain is (CO2)
a) ±2mm b) ±6mm
c) ±5mm d) ±8mm

Q.3 The rise and fall method of reduction of levels, provides a check on (CO4)
a) Back sights b) Fore sights
c) Intermediate sights d) All of the above

Q.4 Survey used for infrastructure projects (CO1)
a) Military survey b) Mine survey
c) geological survey d) Engineering survey

Q.5 Length of Engineering chain is (CO2)
a) 20 m b) 30 m
c) 66 ft d) 100 ft

Q.6 In geodetic survey higher accuracy is achieved, if (CO1)
a) Curvature of earth is ignored
b) Curvature of earth is taken in account
c) Angles between the curved lines are treatedas plane angles
d) None of the above

Q.7 Sensitiveness of a level tube is designated by (CO4)
a) Radius of level tube
b) Length of level tube
c) Length of bubble of level tube
d) None of these

Q.8 The line on which the framework of the survey is built is known as (CO2)
a) Check line b) Base line
c) Tie line d) None of the above

Q.9 The type of surveying which requires last office work is (CO5)
a) Trigonometrically levelling
b) Techeometry
c) Theodolite surveying
d) Plane table surveying

Q.10 If the whole circle bearing of a line is 180º, its reduced bearing is (Co3)
a) S 0º E b) S 0ºW
c) S d) N

SECTION-B

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

Q.11 Define magnetic declination (CO3)
Q.12 Differential Levelling is also called. (CO4)
Q.13 Define oblique offset. (CO2)
Q.14 Define Dip. (CO3)
Q.15 Define Centering. (CO5)
Q.16 Define line of collimation. (CO4)
Q.17 Define bearing of a line. (CO3)
Q.18 Define linear measurement. (CO1)
Q.19 Define axis of bubble tube. (CO4)

Q.20 Write the use of U-fork in plane table surveying. (CO5)

SECTION-C

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

Q.21 What do you understand by working from whole to part. (CO1)

Q.22 Explain the orientation by back sighting method. (CO5)

Q.23 What are the advantages and disadvantages of plane table surveying? (CO5)

Q.24 What are the classification of levelling. (CO4)

Q.25 What is Bench Mark. Give their classification. (CO4)

Q.26 The magnetic bearing of line AB is S 38° 30' W. What its true bearing if declination is 4° 15' towards west. (CO3)

Q.27 What are the source of error in chain surveying? (CO2)

Q.28 Define levelling staff and how they are classified? (CO4)

Q.29 Differentiate between Height of instrument method and Rise and Fall method of reduction of level (CO4)

Q.30 Explain the process of temporary adjustment of a dumpy level. (CO4)

Q.31 Name the different equipment used for plane table surveying. (CO5)

Q.32 Name the different equipments used in chain surveying. (CO2)

Q.33 Explain Intersection method of plane table surveying. (CO5)

Q.34 What is local attraction? How is it eliminated? (CO3)

Q.35 Differentiate between prismatic compass & surveyor's compass. (CO3)

SECTION-D

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

Q.36 The staff reading recorded for a survey work are as follows. First reading was taken on a B.M Whose R.L is 160.150. Find out the R.L's of all stations by Rise and Fall method. (CO4)

Station	B.S	I.S	F.S
1	1.680		
2		1.415	
3		1.735	
4	0.970		1.325
5		1.560	
6		1.785	
7			1.270

Q.37 Explain three point problem? Discuss the trial & error method of solution of problem. (CO5)

Q.38 The following bearings were observed while traversing with a compass. (CO3)

Line	FB	BB
AB	80° 45'	260° 00'
BC	130°30'	311° 35'
CD	240°15'	60° 15'
DA	290° 30'	110° 10'

Mention which stations were affected by local attraction and determine the corrected bearings.