



IQRA NATIONAL UNIVERSITY, PESHAWAR
DEPARTMENT OF CIVIL ENGINEERING
MID Term Examination (Summer Semester 2020)

Subject: Engineering Surveying
Instructor: Engr. Abdul Farhan

Duration: 6 Hrs
Total Marks: 50

Note: Attempt all questions.

Q.NO (01) (10)

What do you mean by balancing of Traverse and what are the different methods used for balancing of Traverse? Explain two of them in detail.	Taxonomy Domain	Programe Learning Objectives
	C-2	1

Q.NO (02) (15)

The following staff reading were taken on the survey line: 0.68, 1.23, 2.31, 2.14, 0.86, 0.53, 0.28, 1.73, 0.95, 2.31, 3.67, 1.32, 4.32. The Instrument was shifted after second, fourth, eighth, tenth and twelveth reading. The reduce level of the bench mark is 915.34, where the first reading is taken. Find the reduce level of the stations using Height of Instrument Method.	Taxonomy Domain	Programe Learning Objectives
	C-3	2

Q.NO (03) (15)

To determine the elevation of top of aerial pole, the following observations were made as : Station A and B and top of aerial pole are in the same vertical plane. Distance between A and B = 30 m.	Taxonomy Domain	Programe Learning Objectives												
<table border="1" style="width: 100%; border-collapse: collapse; margin: 5px 0;"> <thead> <tr style="background-color: #e6f2ff;"> <th style="padding: 5px;">Inst. Station</th> <th style="padding: 5px;">Reading on BM</th> <th style="padding: 5px;">Angle of Elevation</th> <th style="padding: 5px;">Remarks</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">A</td> <td style="padding: 5px;">1.377</td> <td style="padding: 5px;">11°53'</td> <td style="padding: 5px;">R.L of B.M= 30.150 m</td> </tr> <tr> <td style="padding: 5px;">B</td> <td style="padding: 5px;">1.263</td> <td style="padding: 5px;">8°5'</td> <td></td> </tr> </tbody> </table>	Inst. Station	Reading on BM	Angle of Elevation	Remarks	A	1.377	11°53'	R.L of B.M= 30.150 m	B	1.263	8°5'		C-3	2
Inst. Station	Reading on BM	Angle of Elevation	Remarks											
A	1.377	11°53'	R.L of B.M= 30.150 m											
B	1.263	8°5'												

Q.NO (04) (10)

To determined the elevation of station A, the following observation were taken , the rod held vertically. The instrument fitted with Anallatic lens and value of constant was 100 .	Taxonomy Domain	Programe Learning Objectives					
	C-3	2					
Inst. Station	Height of instrument	Staff Station	Vertical angle	Staff Reading			Remarks
O	1.440	B.M	- 5o40'	1.332	1.896	2.460	R.L of BM = 158.205 m
B	1.440	C.P	+8o 20'	0.780	1.263	1.746	
A	1.380	C.P	-6o 24'	1.158	1.617	2.076	