

CONTINUOUS INTERNAL EVALUATION- 2

Dept: Civil Engg	Sem / Div: 3	Sub: Basic Surveying	S Code: 18CV35
Date: 13-01-22	Time: 9:30-11:00 am	Max Marks: 50	Elective: N
Note: Answer any 2 full questions, choosing one full question from each part.			

Q N	Questions	Marks	RBT	COs																																																															
PART A																																																																			
1	a What is closing error? Explain the Bowditch Method of adjusting the traverse.	8	L3	CO2																																																															
	b In the following traverse PQRST, the length and the bearing of side TP is omitted. Calculate the length and bearing of line TP.	8	L3	CO2																																																															
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	c Calculate latitudes, departure and closing error for the following traverse conducted at a place.	9	L3	CO2																																																															
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2	a Explain closed and open traverse with neat sketches.	8	L2	CO2																																																															
	b Explain Latitude and Departure in traverse surveying.	7	L2	CO2																																																															
	c Find out the missing figures and compute the level book page. Apply usual arithmetic check.	10	L3	CO3																																																															
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PART B														
3 a	Define the terms: i) Back sight ii) Fore sight iii) Intermediate sight iv) Turning Point v) Reduced Level	5	L2 CO3											
b	The following Consecutive readings were taken along AB with a 5m leveling staff on a continuously sloping ground interval of 20m. 0.385, 1.030, 1.925, 2.825, 3.730, 4.635, 0.625, 2.005, 3.110, 4.485. The R.L of first point is 208.125m. Enter the above readings in a level-book form and work out the RL's by rise and fall method. And find the gradient of line AB.	12	L3 CO3											
c	Explain reciprocal leveling.	8	L2 CO3											
OR														
4 a	Explain the temporary adjustment of Dumpy level.	7	L2 CO3											
b	Two points A and B, 1530m apart are separated by a wide river. The following reciprocal levels were taken with one level:	8	L3 CO3											
<table border="1"> <thead> <tr> <th rowspan="2">Instrument at</th> <th colspan="2">Staff readings at</th> </tr> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2.165</td> <td>3.810</td> </tr> <tr> <td>B</td> <td>0.910</td> <td>2.355</td> </tr> </tbody> </table>		Instrument at	Staff readings at		A	B	A	2.165	3.810	B	0.910	2.355		
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The collimation error was -0.004m per 100m. Calculate the true level difference between A and B and the refraction.														
c	The following staff readings were observed successively with levelling instrument. The instrument was shifted after 5 th and 11 th readings. Draw a page of level book and determine the R.L of various points by H.I method if the R.L of the 1 st point was 264.350m. 0.485, 1.020, 1.787, 3.395, 3.875, 0.360, 1.305, 1.785, 2.675, 3.385, 3.885, 1.835, 0.435 and 1.705.	10	L3 CO3											