

3015
BOARD DIPLOMA EXAMINATION, (C-09)
JUNE - 2019
*** DIPLOMA IN CIVIL ENGINEERING**
SURVEYING-I
FIRST YEAR EXAMINATION

Time: 3 Hours**Total Marks: 80**

PART - A (10 x 3 = 30 Marks)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. State and explain the primary divisions of surveying.
2. Explain briefly the different types of errors in chain surveying.
3. What are the duties of leader and follower while ranging and chaining.
4. What do you mean by the indirect method of chaining on a sloping ground?
5. Find The Back Bearing. of the following Fore .Bearings (a) $354^{\circ} 24'$ b) $178^{\circ} 04'$ c) $79^{\circ} 24'$.
6. State the Purpose of Compass Survey?
7. Define a) Contour line b) Horizontal equivalent.
8. Define The Terms
(a) Level surface (b) Level line (c) Horizontal line
9. State the different types of levelling instruments.
10. List any three uses of Abney level.

PART - B (5 x 10 = 50 Marks)

Note 1: Answer any five questions and each question carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain with a neat sketch line ranger how it is used in alignment of a line?
12. Describe briefly the various types of obstacles in chain surveying by giving examples with neat sketches.
13. The following bearings were observed in running a closed compass traverse. At what stations do you suspect the local attraction & determine the corrected bearings?

LINE	Fore Bearing	Back Bearing
AB	$75^{\circ} 05'$	$254^{\circ} 20'$
BC	$115^{\circ} 20'$	$296^{\circ} 35'$
CD	$165^{\circ} 35'$	$345^{\circ} 35'$
DE	$224^{\circ} 50'$	$44^{\circ} 05'$
EA	$304^{\circ} 50'$	$125^{\circ} 05'$

14. Explain with neat diagram the adjustment of closing error by graphical method and Bowditch's rule.

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15. The following consecutive readings were taken with a dumpy level and a 4 m staff on a continuously sloping ground. 3.520, 3.150, 1.865, 2.205, 1.985, 3.125, 2.095, 1.705, 1.115, 2.985, 1.565, 0.875. Rule out a page of level field book and enter the readings and calculate the RLs and apply usual check.

16. The following reciprocal observations were made with one level.

Instrument at	Staff readings on		Remarks
	A	B	
A	1.230	2.545	AB=1315m
B	0.580	1.785	R.L of A=532.10

Determine a) The R.L of b) The combined correction for curvature and refraction.

17. Explain with neat sketch the method of Grid contour.

18. Explain with neat sketch how the plans are enlarged or reduced by using Pantagraph?

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