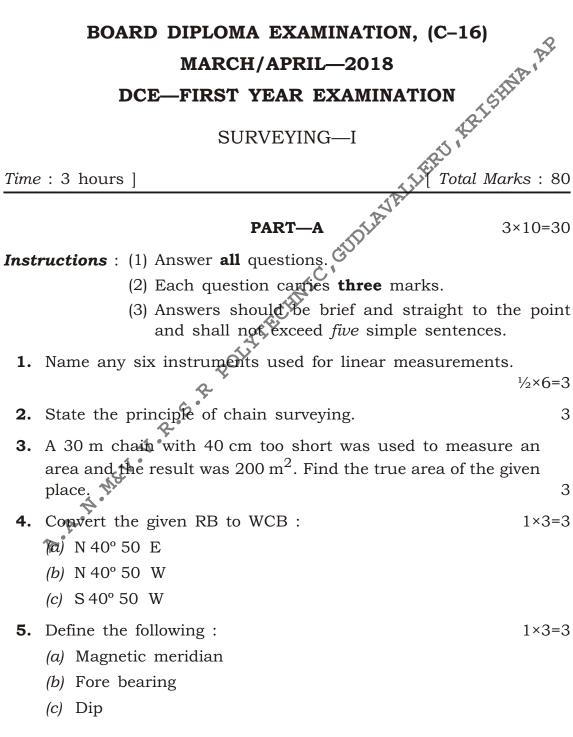


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1

- 6. Write a note on refraction in levelling. Mention mathematical formula for correction. 2+1=3
- **7.** Define the following :
 - (a) Datum surface
 - (b) Reduced level
- 8. Write any three applications of contour maps. $1 \times 3 = 3$
- 9. Mention any two situations where reciprocal levelling is AVALIABED KERLSHIHLIH followed.
- **10.** Write three uses of clinometers.

PART-B

5

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1½×2=3

- Instructions : (1) Answer any five questions
 - (2) Each question carries ten marks.
 - (3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.
- 11. (a) Explain the methods chaining on sloping ground.
 - (b) The area of field was found to be 4000 sq. m, when measured with a chain of 30 m length. If the length of the chain was 0.21 m too short, then find the correct area of the field. &
- 12. Plot the following cross staff survey of a field PQRSTUV and calculate its area : 10

		750 S		
		650	210	Т
R	180	490		
		300	250	U
Q	160	180		
		100	50	V
		0 P		

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2

- **14.** (a) What is local attraction? Explain the procedure in detecting a station affected by local attraction. 2+2=4
 - (b) Find the corrected fore and back bearings of the given closed compass traverse :

Line	FB	BB	P
AB	124° 30	304° 30	TAIL
BC	68° 15	246° 00	SHA
CD	310° 30	135° 15	B. J.
DA	200° 15	17° 45 🔥	

15. Find out the missing figure and complete the level book page.Apply usual arithmetic check : 9+1=10

Station	BS	IS	FS	RISE	FALL	RL	REMARKS
1				Ĵ.	5	149.500	BM
2		2.457		and the	0.827		
3		2.400		0.057			
4	2.697		A.	¢		148.070	СР
5			2,051	0.646		148.716	СР
6		2.500	¢.	1.068		149.784	
7		2.896				149.388	
8		1.			0.124		
9	Ner J	*	2.672	0.348		149.612	

16. The following were the staff readings observed on a continuously sloping ground :

0.705, 1.205, 1.985, 2.345, 0.950, 1.340, 1.975, 0.760, 1.785, 0.905 and 1.235

The RL of the first point was 130.235 m.

- (a) Enter the readings properly into the levelling field book proforma.
- (b) Find reduce levels by HI method.
- (c) Apply the usual arithmetical check. 8+1+1=10

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10

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- **17.** (a) Write any five difficulties faced in levelling and explain to overcome the problems.
 - (b) Calculate the correction due to curvature, correction due to refraction and correction for both for a distance of 700 m. 2+2+1=5
- **18.** (a) Explain the fundamental principles of surveying.
- cedureso A. cedureso A. 3+3=6

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