



C-18-18C-105-C

**6116**

**BOARD DIPLOMA EXAMINATION, (C-18)**

NOVEMBER - 2019

**DCE - I SEMESTER EXAMINATION**

**BASIC SURVEYING**

Time : 2 Hours]

[Total Marks : 40

**PART - A**

**08×01=08**

- Instructions :**
- (1) Answer **ALL** questions.
  - (2) Each question carries **ONE** marks.

- 1 List the classification of survey based on instruments used.
- 2 Write the formula for correction applied to incorrect length of chain.
- 3 What is local attraction in a compass survey.
- 4 Draw the conventional signs of (a) open well and (b) wall with gate.
- 5 What is True bearing of a survey line ?
- 6 Write the principle of compass surveying.
- 7 What is closing error name the method to adjust it.
- 8 Write different types of Traverse in compass survey.

## PART - B

04×03=12

- Instructions :** (1) Answer any **FOUR** questions.  
 (2) Each question carries **THREE** marks.

9 (a) Write any six equipments used in Chain Surveying.

OR

(b) convert the following bearing to other (ie. WCB to RB and RB to WCB)

(a)  $142^{\circ}15'$  (b)  $248^{\circ}45'$  (c) N  $46^{\circ}30'$  W.

10 (a) Write the classification of obstacles in Chain Surveying with examples.

OR

(b) Write any three instrumental errors in compass surveying.

11 (a) Write any three conditions under which the compass surveying is preferred.

OR

(b) Write the functions of the following parts of a compass instrument.

(a) magnetic needle.

(b) Prism.

(c) Cross wire (hair).

12 (a) Write any three checks on closed traverse in compass surveying.

OR

(b) Explain briefly the plotting of compass traverse by included angle method.

## PART - C

04×05=20

**Instructions :**

- (1) Answer any **FOUR** questions.  
 (2) Each question carries **FIVE** marks.

- 13 (a) What is Ranging ? Explain the method of indirect ranging with a neat sketch.

**OR**

- (b) The following FB and BB were observed in traversing with compass in a place where local attraction is suspected.

Line	FB	BB
AB	44°15'	222°30'
BC	105°30'	286°45'
CD	194°	14°
DE	255°15'	76°
EA	304	124°15'

Find out the station affected by local attraction and work out the corrected bearing.

- 14 (a) The distance between two stations was measured with a 20 m chain and found to be 600 m. The same was measured with a 30 m Chain and found to be 596 m. If the 20 m Chain was 5 cm too short what was error in 30 m Chain.

**OR**

- (b) A closed compass traverse PQRS in run with prismatic compass in a clock wise direction.

Line	FB	BB
PQ	50°	230°
QR	170°	350°
RS	230°	50°

- 15 (a) Draw a neat sketch of prismatic compass and label the parts.

OR

- (b) The following fb and bb were observed in traverse with compass in a place where local attraction was suspected

Line	FB	BB
AB	$60^{\circ}30'$	$240^{\circ}30'$
BC	$99^{\circ}15'$	$278^{\circ}$
CD	$38^{\circ}45'$	$221^{\circ}30'$
DA	$321^{\circ}15'$	$139^{\circ}45'$

- 16 (a) What is declination ? In a old map a survey line was drawn with a magnetic bearing of  $200^{\circ}$ . When the declination was  $1^{\circ} 36'$  East. compute the magnetic bearing of the line at the time when the declination is  $0^{\circ} 56'$  West.

OR

- (b) What is closing error? And explain Bowditch method of adjusting closing error in a closed traverse.