



C14-C-304

4223

BOARD DIPLOMA EXAMINATION, (C-14)

MARCH / APRIL - 2019

DCE – III SEMESTER EXAMINATION

SURVEYING-II

Time : 3 Hours]

[Total Marks : 80

PART - A

3×10=30

Instructions :

- (1) Answer **ALL** questions.
- (2) Each question carries **THREE** marks.
- (3) Answer should be brief and straight to the point and shall not exceed five simple sentences.

- 1 List any six component parts of a dumpy level.
- 2 List any six types of levels used in levelling.
- 3 (a) Name any four fundamental lines of a dumpy level. 2
(b) What is GTS benchmark ? 1
- 4 Define the following : (i) mean sea level (ii) bench mark (iii) change point.
- 5 Write any three points differentiating the height of instrument method from the rise and fall method.
- 6 Write the formulae for computing the error due to : (i) curvature (ii) refraction (iii) combined error.
- 7 (a) What is closing error in a traverse ? 2
(b) Name the rules for balancing the closing error. 1
- 8 Define : (i) latitude and (ii) departure of a line in theodolite surveying. 2×1.5=3
- 9 Mention any three general cases of omitted measurements of a closed traverse.
- 10 Write any three checks for closed traverse.

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[Contd...

PART - B**10×5=50**

- Instructions :**
- (1) Answer any **FIVE** questions.
 - (2) Each question carries **TEN** marks.
 - (3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 11** (a) Define : (i) back sight (ii) foresight. **2**
 (b) Explain the steps involved in performing temporary adjustments of a dumpy level. **8**
- 12** (a) Write any two errors that are eliminated in reciprocal levelling. **2**
 (b) List any eight precautions to be taken to prevent personal errors in levelling. **8**
- 13** The following consecutive readings were taken with a level and 4m levelling staff on a continuously sloping ground at common intervals of 30 m.
 0.905 (on A), 1.745, 2.345, 3.125, 3.725, 0.545, 1.390, 2.055, 2.955, 3.455, 0.595, 1.015, 1.850, 2.655, and 2.945 (on B).
 The RL of A was 395.500. Calculate the RLs of different points and find the gradient of the line AB. Use height of instrument method.
- 14** (a) What is meant by permanent adjustment of a level. **2**
 (b) Describe briefly about (i) profile levelling (ii) block contouring. **4+4**
- 15** (a) Write any five characteristics of contours. **5**
 (b) Write any five uses of contours. **5**
- 16** (a) Write functions of any eight parts of a transit theodolite. **8**
 (b) Write any two errors eliminated by method of repetition. **2**

- 17 Explain the method of measurement of (i) Direct angles 5+5
(ii) vertical angles with a transit theodolite.
- 18 The following records are obtained in a traverse survey where the length and bearing of the last line were not recorded :

Line	Length(m)	Bearing
AB	75.50	30°24'
BC	180.50	110°36'
CD	60.25	310°30'
DA	?	?

Compute the length and bearing of line DA.
