## CBCS SCHEME

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18CV35

# Third Semester B.E. Degree Examination, Aug./Sept.2020 Basic Surveying

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

#### Module-1

- 1 a. Distinguish between: (i) Plane survey and Geodetic survey. (ii) Plan and map.
  - (iii) Accuracy and precision. (06 Marks)
  - b. What is ranging? Explain indirect or reciprocal ranging with neat sketch. (08 Marks)
  - c. A line was measured by a 20 mt chain which was accurate before starting the day's work. After chaining 900 mt, the chain was found to be 6 cms too long. After chaining a total distance at 1575 mt, the chain was found to be 14 cms too long. Find the true distance at the line.
    (06 Marks)

#### OR

- 2 a. How is chaining performed on sloping ground by Direct method? Explain.
- (06 Marks)

b. Explain the Basic Principles of surveying.

- (06 Marks)
- c. In chaining pasta pond, stations A and D on the main line, were taken on the opposite sides of the pond. On the Left of AD, a line AB, 200 mt long was laid down and a second line, AC 250 mt long was ranged on the right of AD, the points B, D and C being in the same straight line. BD and DC were then chained and found to be 125 mt and 150 mt respectively. Find the length of AD.
  (08 Marks)

### Module-2

- 3 a. Distinguish between:
  - (i) Magnetic meridian and True Meridian (ii) WCB and QB.
  - (iii) Isgonic line and Agonic line.

(06 Marks)

- b. Differentiate between prismatic compass and surveyor's compass.
- (06 Marks)
- c. Following bearing were observed with a compass. Calculate the interior angles. (08 Marks)
  - CD DE LA

Line	AB	BC	CD	DE	EA
Fore bearing	60°30′	122°0′	46°0'	205°30′	300°0′

#### OR

- 4 a. Define: (i) True menedian and time bearing.
  - (ii) Isogonic line and Agonic line.
  - (iii) Fore bearing and Back bearing.

(06 Marks)

b. The following are the bearings of a closed traverse ABCDEA. At what stations, do you suspect the local attraction? Find the corrected bearings of the lines. (07 Marks)

Line	FB	BB
AB	124°30′	304°30′
BC	68°15′	246°0′
CD	310°30′	135°15′
DA	200°15′	17°45′

c. In the following traverse ABCDE, the length and bearing of line EA is omitted, calculate the length and bearing of line EA. (07 Marks)

Line	Length (m)	Fore Bearing (FB)
AB	204.0	87°30′
BC	226.0	20°20′
CD	187.0	280°0′
DE	192.0	210°03′
EA	?	?

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