

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PLAN - SEMESTER-II EXAMINATION – WINTER 2015

Subject Code: 1025502**Date: 08/12/2015****Subject Name: Surveying & Photogrammetry****Time: 02:30pm to 04:30pm****Total Marks: 50****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (A)**07**

- 1) An Indirect method of contouring, the process of locating or identifying points lying on a contour is called
 - a) Ranging
 - b) Centring
 - c) Horizontal Control
 - d) Vertical Control
- 2) In the cross-section method of indirect contouring, the spacing of cross-sections depends upon
 - i) contour interval
 - ii) scale of plan
 - iii) characteristics of groundThe correct answer is
 - a) only (i)
 - b) (i) and (ii)
 - c) (ii) and (iii)
 - d) (i), (ii) and (iii)
- 3) In the prismatic compass
 - a) the magnetic needle moves with the box
 - b) the line of sight does not move with the box
 - c) the magnetic needle and graduated circle do not move with the box
 - d) the graduated circle is fixed to the box and the magnetic needle always remains in the N-S direction
- 4) If the length of a chain is found to be short on testing, it can be adjusted by
 - a) straightening the links
 - b) removing one or more small circular rings
 - c) closing the joints of the rings if opened out
 - d) all of the above
- 5) In chain surveying tie lines are primarily provided
 - a) To check the accuracy of the survey
 - b) To increase the number of chain lines.
 - c) To take offsets for detail survey
 - d) To avoid long offsets from chain lines

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- 6) Closed contours of increasing values towards their centre, represent
- A hill.
 - A river bed.
 - A saddle or pass.
 - A depression.
- 7) If in a closed traverse, the sum of the north latitudes is more than the sum of the south latitudes and also the sum of west departures is more than the sum of the east departures, the bearing of the closing line is in the
- NE quadrant
 - SE quadrant
 - NW quadrant
 - SW quadrant

- (B) Write Ranges of 03
- Small scale
 - Medium scale
 - Large scale

Q.2 (A) Discuss method of chaining on sloping grounds. 05

- (B) Define : 05
- Contour Interval
 - Horizontal Equivalent
 - Contour

OR

- (B) Define : 05
- Whole circle bearing
 - Quadrantal bearing

Q.3 (A) Uses of contours. 05

(B) Uses of GIS, GPS and PHOTOGRAMMETRIC survey. 05

OR

Q.3 (A) Draw a proper scale and show 16.8 m and 21.4 m on it. Find RF of your scale. 07

(B) Draw symbols for following. 03
Open well, Dry- well, Mines

Q.4 (A) Draw the sketch of the instruments necessary for “Chain & tape survey”. Explain their uses. 10

OR

Q.4 (A) Draw a neat sketch of a prismatic compass. Label the parts. 10

Q.5 (A) The following bearings were observed in traversing with a compass. Find out the included angles. 10

Line	F. B.	B. B.
AB	N 46° 10' E	S 46° 10' W
BC	S 60° 40' E	N 60° 40' W
CD	S 9° 50' E	N 9° 50' W
DA	N 80° 40' W	S 80° 40' E

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OR

- Q.5 (A)** Following readings were taken with a dumpy level and 5 m leveling staff on a continuous sloping ground at common interval of 20 m. **10**
0.385, 1.030, 1.925, 2.825, 3.730, 4.685, 0.625, 2.005, 3.110, 4.485.
First reading was taken on the bench mark having RL 208.125 m. Find RLs of all points by Rise and fall method. Apply Arithmetic check.
