Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY BPLAN – SEMESTER 2–• EXAMINATION – SUMMER 2017

Subject Code: 1025502 Subject Name: Surveying & Photogrammetry

Time: 10.30AM to 12.30PM

Total Marks: 50

**Instructions:** 

1. Attempt all questions.

Make suitable sketches wherever necessary.
 Figures to the right indicate full marks.

## Q.1 (A) 1) Hydro-graphic surveys deal with the mapping of

07

Date: 26/05/2017

- a) Large water
- b) Heavenly bodies
- c) Mountainous region
- d) Canal system
- 2) Pick up the correct statement from the following:
  - a) The diaphragm plays no part in defining the line of sight
  - b) The optical centre of the objective plays no part in defining the line of sight
  - c) The eyepiece plays no part in defining the line of sight
  - d) None of these.
- 3) 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
- 4) The intercept of a staff
  - a) Is maximum if the staff is held truly normal to the line of sight.
  - b) Is minimum if the staff is held truly normal to the line of sight.
  - c) Increases if the staff is tilted towards normal.
  - d) Decreases if the staff is tilted away from normal.
- 5) Closed contours of decreasing values towards their centre, represent
  - a) A hill.
  - b) A river bed.
  - c) A saddle or pass.
  - d) A depression.
- 6) The accuracy of measurement in chain surveying, does not depend upon
  - a) Scale of the plotting
  - b) Importance of the features
  - c) Length of the offset
  - d) General layout of the chain lines.

b) In the plane of cross hairs c) At the optical centre of the eye-piece d) Anywhere inside the telescope. **(B)** Write Ranges of 03 a) Small scale b) Medium scale c) Large scale **Q.2** (A) Compare HI method and Rise and Fall method. 05 **(B)** Differentiate between prismatic compass and surveyor's compass. 05 OR **(B)** Find out which scale is smaller of these two? 05 1 cm = 10 m; or 1 cm = 15 mQ.3 (A) Characteristics of contour lines. 05 **(B)** Uses of GIS, GPS and PHOTOGRAMMETRIC survey. 05 OR Q.3 (A) Draw a scale 1 cm = 3 m and show 33.3 m on it. 05 (B) Draw symbols for following. Lawn, stations of survey work, telephone line, Pine 05 tree, wall and gate Q.4 (A) Draw the sketch of the instruments necessary for "Chain & tape survey". Explain 10 their uses. OR **Q.4** (A) Draw a neat sketch of a Dumpy Level. Label the parts. 10 **Q.5** (A) Following bearings were observed in running a closed traverse. 10 Calculate the Included Angle. LINE **Fore Bearings** 60° 30' AB 122° 00' BCCD 46° 00' DE 205° 30' EA 300° 00'

7) The real image of an object formed by the objective, must lie

a) At the centre of the telescope

OR

Q.5 (A) The following staff readings were observed successively with a level, the instrument having been moved after third, sixth and eighth readings: 2.228, 1.606, 0.988, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters.
Calculate RL of points if the first reading was taken with a staff held on a bench mark of 432.384 m.