



B.Tech III Semester Regular Examinations, February 2022
SURVEYING & GEOMATICS

(Civil Engineering)

Maximum Marks: 70

Date: 23.02.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Define survey station.
- 2 What are the principles of surveying?
- 3 Define bench marks.
- 4 Define types of contours.
- 5 Define standards of theodolite.
- 6 List the temporary adjustments of a theodolite.
- 7 What are the uses of tachemetry?
- 8 List the three types of telescopes used in stadia surveying.
- 9 Define total station.
- 10 What do you understand from the term satellite configuration?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 On a closed compass traverse survey PQRST, following are the observation made with a suspicion of local attraction. Identify the station affected with local attraction. 10M

Line	FB	BB
PQ	147°3'	26°45'
QR	74°30'	253°00'
RS	41°30'	222°45'
ST	312°15'	132°45'
TP	219°15'	39°15'

OR

- 12 Discuss about the classification in surveying 10M
- 13 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, 2.090, 2.864, 1.262, 0.602, 1.982, 1.044, 2.684 meters. Enter the above readings in a page of a level book and evaluate the R.L. of points if the first reading was taken with a staff held on a bench mark of 432.384 m. 10M

OR

- 14 Explain the working principle of a dumpy level with neat sketch. What are the various temporary adjustments? 10M

- 15 Derive an expression for the determination of horizontal and vertical distance using tangential method when both angles are angles of elevation 10M
OR
- 16 Recommend the various methods of measuring horizontal angle using a theodolite. 10M
- 17 What are the types of errors that may occur in tacheometry? What are the necessary precautions to avoid them? 10M
OR
- 18 Explain in brief how to setting out the simple curve using tacheometric surveying. 10M
- 19 Classify the main components of GPS receiver and explain them briefly. 10M
OR
- 20 Discuss the emerging Trends in GPS Technology. 10M