



R18 Regulation

Subject code:2P3AB

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

## B.Tech III Semester Supplementary Examinations, December 2025

### SURVEYING & GEOMATICS

(CE)

Maximum Marks: 70

Date:30.12.2025

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) |   |       |    |     |
|--|---|-------|----|-----|
|  |   | Marks | CO | BTL |
| 1  | Define the terms of: face left and face right observations. | 2M    | 1  | L1  |
| 2  | What is spirit level and how it works?                      | 2M    | 1  | L1  |
| 3  | What are the sources of errors in theodolite?               | 2M    | 2  | L1  |
| 4  | Write any 2 Contour Characteristics.                        | 2M    | 2  | L1  |
| 5  | What are the temporary adjustments in Theodolite?           | 2M    | 3  | L1  |
| 6  | How do you check the correctness of closed traversing?      | 2M    | 3  | L1  |
| 7  | What are the different sources of errors in plane tabling?  | 2M    | 4  | L1  |
| 8  | How to determine the capacity of reservoir?                 | 2M    | 4  | L1  |
| 9  | What are the different methods of tacheometric survey?      | 2M    | 5  | L1  |
| 10   | State EDM and how its work?                                 | 2M    | 5  | L1  |

#### Part-B

| Answer All the following questions. (5X10M=50Marks) |   |       |    |     |
|---|---|-------|----|-----|
|   |   | Marks | CO | BTL |
| 11  | What are the types of survey? Explain briefly?  | 10M   | 1  | L2  |
| OR  |   |       |    |     |
| 12  | Explain the following terms A) Accuracy B) True error C) Precision.   | 10M   | 1  | L2  |
| 13  | What are the obstacles in chaining?   | 10M   | 2  | L2  |
| OR  |   |       |    |     |
| 14  | What are the methods of determination of area from plan? Explain any one method with the help of a neat sketch. | 10M   | 2  | L2  |
| 15  | What are the temporary adjustments of a level.  | 10M   | 3  | L2  |
| OR  |   |       |    |     |

|    |   |     |   |    |
|----|---|-----|---|----|
| 16 | In levelling between two points A and B opposite banks of a river, the level was set up near A , and the staff readings on A and B were 1.285 and 3.680 m . The level was then moved and set up near B and the respective readings on A and B were 0.876 and 1.228 .Find the true different of level between A and B. | 10M | 3 | L2 |
| 17 | Discuss the methods of tacheometric surveying with neat sketches.   | 10M | 4 | L2 |
|    | OR  |     |   |    |
| 18 | Explain the setting out of simple curve by two theodolite methods by neat sketch.   | 10M | 4 | L2 |
| 19 | Different systems of tacheometric measurements.   | 10M | 5 | L2 |
|    | OR  |     |   |    |
| 20 | Explain applications and observations of GPS.   | 10M | 5 | L2 |