



R17 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 1P3AE

B.Tech II Year I Semester Supplementary Examinations, February 2021

SURVEYING

(Civil Engineering)

Maximum Marks: 70

Date: 01.03.2021 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 Discuss ranging. Mention its types.
- 2 Distinguish between Magnetic Dip and Declination
- 3 List out the steps in temporary adjustments of theodolite surveying.
- 4 Write down the contour lines for hill and a depression
- 5 What do you infer about centering of a theodolite?
- 6 List the errors which are eliminated in measurement of horizontal angles by repetition method.
- 7 Summarize the principle of stadia method.
- 8 Compare theodolite and tachometer.
- 9 List the functions of transition curves.
- 10 State three point problem in hydrographic surveying.

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 (i) Describe the method of ranging by using a line ranger. (5M)
(ii) Show the different methods of overcoming difficulties if there are obstacles in chaining and ranging both. (5M)
- OR
- 12 Explain with neat sketch reciprocal ranging. (10M)
 - 13 Describe the profile leveling and cross sectional leveling. (5M)
- OR
- 14 Explain the characteristics of contours and also explain about types of contours. (10M)
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- 15 The following consequent readings were taken in a level and a 4m leveling staff on a continuously sloping ground at common interval of 30m, the readings are 0.855, 1.545, 2.335, 3.115, 3.825, 0.455, 1.380, 2.055, 2.855, 3.455, 0.585, 1.015, 1.850, 2.755, 3.845. R.L of A is 380.500 m and the last reading is taken on point B. Find the gradient between A and B. (10M)

OR

- 16 (i) Explain the essential parts of theodolite? (5M)
(ii) Explain the temporary adjustments of theodolite? (5M)
- 17 Explain different systems of Tachometry measurements. (10M)

OR

- 18 An instrument was setup at station P and the angle of elevation to an object was $9^{\circ}30'$ the same object was focused from a point 4m away the first, the angle was $11^{\circ}15'$. The staff reading is from a B.M having elevation of 2650.38m are 3.10m and 1.815m respectively. Find the RL of Q. (10M)
- 19 What are the segments of GPS? Describe them briefly. (10M)

OR

- 20 How is Traversing done using Total station? (10M)