



R20 Regulation

Subject code: 3P3AC

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech III Semester Supplementary Examinations, December 2025

SURVEYING AND GEOMATICS (CE)

Maximum Marks: 70

Date: 19.12.2025

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 Representative Fraction.	2M	1	L1
2	What is Back Bearing?	2M	1	L1
3	Define Compass Surveying.	2M	2	L1
4	Define True Meridian.	2M	2	L1
5	Define Instrument height.	2M	3	L1
6	Write the formula of Simpson's Rule?	2M	3	L1
7	Mention the types of curves and their necessity.	2M	4	L1
8	What is stadia method of Tacheometry?	2M	4	L1
9	Define simple curve.	2M	5	L1
10	What is Total Station?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Explain the use and working of line ranger.	5M	1	L2
	b) Find the maximum length of offset so that displacement of the point on the paper from both sources of error should not exceed 0.25 mm, given that the offset is measured with an accuracy of 1 in 50 and scale is 1 cm = 8 m.	5M		
OR				
12	What are the obstacles in chain surveying. Explain them with neat sketches?	10M	1	L2
13	a) Write the Classification of surveying ? Explain briefly?	5M	2	L2
	b) Explain the errors in chaining?	5M		
OR				
14	a) What is leveling and Explain different methods of leveling.?	5M	2	L2
	b) What is Simpson's rule and what are its limitations?	5M		

15	a) Explain in brief the various temporary adjustments of a theodolite? b) What are the different types of errors which can occur in theodolite surveying? How would you avoid them?	5M 5M	3	L2
	OR			
16	Briefly explain about the measurement of horizontal angle by reiteration method and repetition Method.	10M	3	L2
17	Explain different systems of tacheometry measurements?	10M	4	L2
	OR			
18	a) Derive relation between Degree and Radius of curve? b) What are the types of simple and explain the setting out of simple curves?	5M 5M	4	L2
19	Explain different types of EDM instruments?	10M	5	L2
	OR			
20	Discuss various applications of GPS.?	10M	5	L2