



R18 Regulation **Subject code:2P3AB**
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
 (Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech III Semester Supplementary Examinations, February 2024

SURVEYING & GEOMATICS
(CIVIL ENGINEERING)

Maximum Marks: 70

Date:19.02.2024 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 which carries 10M.
 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)			CO	BTL
1	Define True Bearing, Magnetic bearing & Arbitrary bearing?	2M	CO1	L1
2	Convert the following, reduced bearing to whole circle bearings: a. N36°16'E b. S28°14'E c. S47°26'W d. N58°24'W	2M	CO1	L2
3	Write the principle of plane table surveying?	2M	CO2	L1
4	Define contour and contour interval?	2M	CO2	L2
5	What are the temporary adjustments of theodolite?	2M	CO3	L1
6	Define face left and face right?	2M	CO3	L1
7	What are the Tachometer constants?	2M	CO4	L2
8	Write the types of curve and their necessity?	2M	CO4	L1
9	What are the components of GPS?	2M	CO5	L2
10	Define space segment, control segment and user segment?	2M	CO5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)				CO	BTL
11	A. The bearings of the sides of a closed traverse ABCDE are as follows: Compute the interior angles of the traverse		7M	CO1	L3
	Side	Fore bearing	Back bearing		
	AB	35°30'	215°30''		
	BC	115°15'	295°15''		
	CD	181°45'	1°45'		
	DA	281°45'	101°45'		
	B. Explain whole circle bearing system and reduced bearing system?		3M		L2
OR					

12	A. Explain briefly the Classifications of Surveying? B. Explain the errors in chaining?	5M 5M	CO1	L3 L3										
13	The following readings were observed successively with a leveling instrument. The instrument was shifted after fifth and eleventh readings. 0.480, 1.210, 1.635, 3.395, 3.775, 0.650, 1.400, 1.795, 2.575, 3.375, 3.895, 1.735, 0.635, 1.605 m Determine the R.L of various points and shows the entries in a level book, if the RL of first point is 100m, using H.I Method.	10M	CO2	L3										
	OR													
14	The following perpendicular offsets were taken from a chain line to an irregular boundary line. <table border="1"> <tr> <td>Chainage(m)</td><td>0</td><td>6.50</td><td>16.20</td><td>27.</td></tr> <tr> <td>Offset (m)</td><td>3.50</td><td>4.75</td><td>5.20</td><td>6.3</td></tr> </table> Measure the area between the chain line and the boundary. Using Trapezoidal and Simpson's Rule	Chainage(m)	0	6.50	16.20	27.	Offset (m)	3.50	4.75	5.20	6.3	10M	CO2	L3
Chainage(m)	0	6.50	16.20	27.										
Offset (m)	3.50	4.75	5.20	6.3										
15	A. Explain about measurements of horizontal and vertical angles? B. Define theodolite and write its description and uses?	5M 5M	CO3	L3 L3										
	OR													
16	A. Discuss the methods of traversing with computation and adjustments? B. Explain Gale's traverse table.	5M 5M	CO3	L3 L3										
17	Discuss different types of curves?	10M	CO4	L3										
	OR													
18	Briefly explain the tangential methods of tachometry	10M	CO4	L3										
19	Discuss the applications of Total Station and Global positioning system	10M	CO5	L3										
	OR													
20	Explain Electromagnetic wave theory ?	10M	CO5	L3										