Enrollment No. _____

NAVRACHANA UNIVERSITY
a UGC recognized University

School: School of Engineering and Technology
Program/s: B.Tech Civil Engineering
Year: 2nd **Semester:** 3rd
Examination: End Semester Examination
Examination year: November 2023

Course Code: CE221 **Course Name:** **Surveying**
Date: 25/11/2023
Time: 1:00 p.m. to 3:00 p.m.

Total Marks: 40
Total Pages: 1

Instructions:

- *Write each answer on a new page.*
- *Use of a calculator is permitted*

Q. No.	Details	Marks	CO	BTL
Q.1	**Answer following (Any four):** 1. Make a diagram to show main survey station, Subsidary station, Base line and Tie line on it. 2. Define Declination and explain it with figure. 3. State the principle of plane table survey and explain any one method with figure. 4. What is the function of foot screws, upper & lower plate clamp screw. focusing screw and vertical clam screw in Transit Theodolite? 5. How will you work out the area of plot by methods of geometrical figures?	20	CO1, 2	BTL1, 2, 4
Q.2	For the following perpendicular offsets were taken at 10m intervals from chain line to an irregular boundary line: 3.10, 4.20, 5.35, 6.45, 7.15, 8.25, 7.95 and 5.20 Find area using: 1) Trapezoidal rule, 2) Simpson's rule	07	CO2, 3	BTL2, 4, 6
Q.3	The following readings were taken with level and a 4m staff. Find Reduced level by Rise and fall method. 0.683 BM (51.362m), 1.190, 1.838, 3.399, (3.877 and 0.451) CP, 1.405, 1.896, 2.676, 3.478, (3.999 and 1.834) CP, 0.649, 1.706.	07	CO2, 3	BTL2, 5, 6
Q.4	Balance Latitude and Departure for following Traverse data using Bowditch rule:	06	CO 4, 5	BTL3, 5, 6, 7

Length	Latitude	Departure
189.53	-188.403	-20.634
175.18	-152.268	86.617
197.78	29.916	-195.504
142.39	139.068	-30.576
234.58	171.607	159.933