

ANURAG Engineering College

(An Autonomous Institution)

II B.Tech I Semester Supplementary Examinations, Jan/Feb-2024

SURVEYING AND GEOMATICS

(CIVIL ENGINEERING)

Time: 3 Hours**Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Explain objectives of surveying?	CO1	L1	2M
2. List out the tape corrections	CO1	L1	3M
3. Explain Simpson's rule for calculating area of field.	CO2	L2	2M
4. Define Contour, Horizontal equivalent and Contour gradient	CO2	L1	3M
5. Explain the omitted measurements in traversing?	CO3	L2	2M
6. List out temporary adjustment of theodolite.	CO3	L1	3M
7. Explain principle of EDM	CO4	L2	2M
8. Explain mid ordinate of the simple curve.	CO4	L2	3M
9. Define photographic survey	CO5	L1	2M
10. Write the difference between map and mosaic?	CO5	L2	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) Explain briefly about classification of surveying. CO1 L3 10M
OR
 B) The following bearings were observed where local attraction was suspected. Calculate the actual bearings.
- | Line | FB | BB | | | |
|------|------------|------------|-----|----|-----|
| AB | S 30°30' W | N 31°15' E | CO1 | L3 | 10M |
| BC | S 60°45' W | N 59°30' E | | | |
| CD | N 18°30' E | S 19°00' W | | | |
| DA | S 60°30' E | N 60°00' W | | | |
| | | | | | |
12. A) In running fly levels from a bench-mark of RL 140.625, the following readings were obtained:
 Back sight ----1.255, 2.265, 1.295, 2.995 CO2 L3 10M
 Fore sight ----0.265, 2.535, 1.395, 2.639
 Calculate the levels by using HI Method.
OR
 B) Describe in detail about the finding of volume from spot levels and Contours? CO2 L3 10M
13. A) Explain in detail about Repetition and Reiteration method CO3 L3 10M
OR

- B) The lengths and bearings of the four lines of a closed traverse ABCDE. Determine the length and bearing of the fifth line EA.

Line	Length	Bearing
AB	194.1m	85°
BC	201.2m	15°
CD	165.4m	285°30'
DA	172.6m	195°30'
EA	?	?

CO3 L3 10M

14. A) Describe the method of determining the constants (K & C) of a tachometer from field measurements.

CO4 L3 10M

OR

- B) i) Explain the errors in Total Station
ii) What are the principles and applications in GPS?

CO4 L3 5M
5M

15. A) Explain briefly relief, tilt displacements and flight planning

CO5 L3 10M

OR

- B) Explain the methods of photographic mapping triangulation?

CO5 L3 10M