Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Agriculture Engineering) (Sem.–1)
SURVEYING AND LEVELLING
Subject Code : BTAG-105-22
M.Code : 92763
Date of Examination : 23-01-23

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.**
4. **Select atleast TWO questions from SECTION - B & C.**

SECTION-A

l. **Write short notes on :**

a) Explain the basic principle of surveying.

b) Define cross staff survey.

c) Draw contour patterns for a vertical cliff and a pond.

d) How many satellites are minimum required to get the exact location with the help of GPS?

e) What is coefficient of refraction? Does the effect of refraction remain constant?

f) Write **any two** errors in Total Station Survey.

g) Explain planimeter.

h) Differentiate between electronic theodolite and conventional theodolite.

i) The magnetic bearing of a line is 197º. Find its true bearing, if the magnetic declination is 3º W.

j) What do you understand by back sight orientation in plane table surveying?

SECTION-B

2. Explain the different obstacles encountered in chain surveying.

3. Explain Field procedure for Total Station Survey.

4. Will the area of a traverse calculated by different methods give identical results? Explain.

5. Define contour. What do you understand by contour interval and on what factors does it depend?

SECTION-C

6. Explain the term closing error. Which principle is used to adjust it?

7. Explain the temporary adjustments of a theodolite.

8. Explain the differences between contouring and levelling.

9. Explain the advantages and disadvantages of plane table surveying.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.