Code No: R1621356 **R16** SET - 1

II B. Tech I Semester Supplementary Examinations, January - 2023
SURVEYING
(Agricultural Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A Marks:14

1.	a)	Define the term surveying.	(3M)
	b)	Define the terms “Leveling” and “Bench Mark”.	(2M)
	c)	List the methods of area calculating irregular boundaries.	(2M)
	d)	Define the terms (i) Transiting (ii) Swinging	(2M)
	e)	Explain the Tachometric constants.	(2M)
	f)	State the fundamentals of GPS.	(3M)

PART –B Marks:56

2.	a)	The magnetic bearing of a line AB is S38°30'W.Calculate the true bearing If the magnetic declination is (i) 4°30'W and (ii) 3°30'E.	(7M)
	b)	Define the terms Traverse and Local attraction.	(7M)
3.	a)	The following consecutive readings were taken with a dumpy level and a 4m leveling staff on a continuously sloping ground at 30m intervals, 0.680, 1.455, 1.855, 2.330, 2.885, 3.380, 1.055, 1.860, 2.265, 3.540, 0.835, 0.945, 1.530, and 2.250. The R.L. of the starting point was 100.000m, Determine the gradient of the Line joining the first and last point.	(7M)
	b)	Define the term Stratum contour.	(7M)
4.	a)	State the Area Calculation by Trapezoidal Rule.	(7M)
	b)	The area on a map with a scale of 1:12000 as measured with a planimeter is 2.54 sq in. What is the area in acres?	(7M)
5.	a)	Describe the reiteration method of measurement of Horizontal angle.	(7M)
	b)	Define the terms “Longitude and Latitude”.	(7M)
6.	a)	Derive Expressions for the Horizontal distance D and the vertical intercept V when the staff is Normal to line of sight.	(7M)
	b)	State the merits and demerits of Tachometric survey.	(7M)
7.	a)	Explain the Principle of working of Total Station Instrument and Draw the Diagram.	(7M)
	b)	Explain the causes of errors and corrections in GPS observations.	(7M)
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