KERALA AGRICULTURAL UNIVERSITY
B. Tech. (Agrl. Engg.) 2021 Admission
II Semester Final Examination – September 2022

Lwre.1203   Surveying and Levelling (1+2)   **Marks: 50**
Time: 2 hours

I   **Choose the correct Answer**   **(10x1=10)**

1. The book in which tape/ chain measurements are entered is called as
   (a) Field book
   (b) Office book
   (c) Note book
   (d) survey book

2. The instrument used in measuring slope angle is
   (a) Auto level
   (b) Abney level
   (c) Surveyor compass
   (d) Planimeter

3. Alidade is used in .... survey.
   (a) Plane table
   (b) Compass
   (c) Chain
   (d) Contour

4. Sag correction is
   (a) compensating and positive
   (b) cumulative and negative
   (c) cumulative and positive
   (d) depends on area of survey

5. GPS is
   (a) Global Positioning Satellite
   (b) Geographic Positioning System
   (c) Global Positioning System
   (d) Geographic Positioning Satellite

6. Magnetic inclination at the equator is
   (a) 0 degree
   (b) 45 degree
   (c) 60 degree
   (d) 90 degree

7. Survey done for fixing property lines and calculation of areas of landed property is
   (a) City
   (b) Compass
   (c) Topographic
   (d) Cadastral

8. RF of scale 1m = 1cm is
    (a) 10: 1
    (b) 1:1
    (c) 100:1
    (d) 1:100
9. The difference between fore bearing and back bearing is .... Degree.
    (a) 60
    (b) 120
    (c) 90
    (d) 180
    Fill in the blanks
10. ....is use for setting right angles in chain surveying.

II   **Write short notes on ANY FIVE of the following**   (5x2=10)
1. Dip and declination
2. Bearing
3. Principle of surveying
4. Optical square
5. Total survey station
6. Write trapezoidal and prismoidal formula for computation of volume
7. Types of levelling

III   **Answer any FIVE of the following**   (5x4=20)
1. Enlist methods to overcome the obstacles to both chaining and ranging.
2. Classify surveying based on the nature of the field.
3. Write about different minor instruments used in surveying.
4. The following fore and back bearings were observed in compass traversing where local attraction was suspected. Fill up the corrected fore and back bearings and also true bearings assuming magnetic declination of 5° 5' E

Line	Observed FB	Observed BB	Corrected FB	Corrected BB	True FB	True BB
AB	65° 30'	245° 30'	?	?	?	?
BC	104° 15'	283° 0'	?	?	?	?
CD	43° 45'	226° 30'	?	?	?	?
DE	326° 15'	144° 45'	?	?	?	?

5. Errors in Chaining
6. GPS survey
7. Differentiate between primary divisions of Surveying.

IV   **Write an essay on ANY ONE of the following**   (1x10=10)
1. Explain about Plane table survey.
2. Areas and volumes

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