



KERALA AGRICULTURAL UNIVERSITY
B.Tech.(Agri. Engg) 2018 Admission
II Semester Final Examination- June 2019

Lwre.1203

Surveying and Levelling (1+2)

Marks: 50

Time: 2 hours

(10x1=10)

I Fill in the blanks

- 1 A surveyor plot a distance as small as 0.25 mm and the scale of plotting is 1 in 10000 the distances in the field can be measured to the nearest _____
- 2 The error in linear measurements by a steel tape due to small momentary changes in temperature is a _____
- 3 The vertical angle between the longitudinal axis of a freely suspended magnetic needle and the horizontal line is called _____
- 4 A map showing only the contour of an area is called _____
- 5 _____ points indicates the shifting of the instrument

State True or False

- 6 The sign of correction is always opposite to that of the error
- 7 The lines joining the main survey stations are called check lines
- 8 Agonic lines pass through points of equal declination
- 9 The sum of interior angles of a closed traverse is $(2n-4) \times 90^0$
- 10 Clinometer measures horizontal angle

II Write Short notes on any FIVE of the following

(5x2=10)

- 1 Differentiate between Whole circle bearing and Quadrantal bearing?
- 2 A 30 m tape used for measuring a line was found to be 30.01 m at the beginning and 30.03 m at the end of the work. The area of the plan drawn to a scale of 1 cm = 10 m was measured with the help of planimeter and was found to be 51.46 cm². Find the correct area of the field.
- 3 Local attraction
- 4 Fly levelling.
- 5 Height of Instrument in leveling operation.
- 6 Working principle of total station.
- 7 Tacheometric surveying

III Answer any FIVE of the following.

(5x4=20)

- 1 Declination and different types of variations in declination
- 2 Direct and indirect ranging.
- 3 Differentiate between surveyor's compass and Prismatic compass
- 4 Benchmark and types of bench mark.
- 5 Uses of contour map.
- 6 Orientation in plane tabling.
- 7 GPS.

IV Answer any ONE of the following

(1x10=10)

- 1 Different methods of calculating the reduced level.
- 2 Characteristics of contours.
