



KERALA AGRICULTURAL UNIVERSITY
B.Sc.(Hons) Forestry 2018 Admission
II Semester Final Examination- August 2019

Narm.1201

Forest Survey and Engineering (2+1)

Marks: 50

Time: 2 hours

(10x1=10)

I Fill up the blanks

- 1 The lower plate of theodolite is known as -----
- 2 Parallax is eliminated by -----
- 3 Perpendicular offsets may be taken by setting right angle in the ratio of -----
- 4 When sequence of connected lines does not return to the starting point it is called -----
- 5 In reduction of levels ----- system is simple and less tedious
- 6 ----- m is the height of metric staff
- 7 ----- is a tunnel carrying a system under road or railway

State True or False

- 8 For a rise of about 550 ft. there is a fall of 1°F in boiling point temperature of water
- 9 In Reversible type tilting level telescope can be rotated to 180°
- 10 Plumbing fork is used for transferring the ground point on the sheet

II Write short notes on any FIVE of the following

(5x2=10)

- 1 Differentiate transiting and swinging the telescope
- 2 List the possible errors and correction in chain surveying
- 3 Differentiate (a) chaining and ranging (b) city and cadastral survey
- 4 Compare metric and British systems of measurement
- 5 Convert the following WCB to QB
(a) 45° 30' (b) 125° 45' (c) 222° 15' (d) 320° 30'
- 6 Find the back bearings for the following observed Fore Bearing of the lines
(a) 38° 14' (b) 142° 18' (c) S 60° 15' W (d) N 45° 30' E
- 7 Find the angle between the lines if their respective bearings are as follows
(a) AB 40° 15' and AC 130° 25' (b) AB 120° and BC 60°

III Answer any FIVE of the following.

(5x4=20)

- 1 The following staff readings were observed successively with a level, the instrument having been moved after third, sixth, and eight readings. 2.225, 1.605, 0.995 (cp), 2.090, 2.865, 1.265(cp), 0.600, 1.985(cp), 1.045, 2.685 m. Enter the above readings in a page of level book and calculate the reduced levels of all the points if the first reading was taken with a staff held on bench mark of 135.75 m.
- 2 Alignment of forest roads
- 3 Features of self reading staff and target staff
- 4 Working principle of Box sextant and its disadvantages
- 5 Draw a neat sketch for prismatic compass
- 6 List the adjustments and possible errors in prismatic compass
- 7 Types of forest roads

IV Answer any ONE of the following

(1x10=10)

- 1 Explain Minor surveying instruments
- 2 (a) List the objectives and principles of levelling
(b) Classify levelling methods
