KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Forestry 2016 Admission

II Semester Final Examination-August-2017

Narm.1201 **Forest Survey and Engineering (2+1)**

Marks: 50

Time: 2 hours

I Fill up the Blanks **(10x1=10)**

1 In surveying the art of determining relative heights or elevations of points is known as ----------

2 The back bearing of a line with FB = 207° 30` is ----------

3 ---------- is an instrument used for setting a perpendicular to a chain line.

4 The process of making the crosshairs distinctly seen is known as ----------

5 The bearings taken in the direction of progress of the survey is known as ----------

State True or False

6 The mistakes made in reduction of levels of intermediate points remain undetected in the rise and fall system.

7 Change points is a point on which only foresights are taken.

8 The magnetic meridian passing through a point on the earth's surface is the line in which the plane passing through the given point and the north and south poles intersects the surface of the earth.

9 In whole circle system, the bearing of a line is always measured from the north direction of the reference meridian towards the line in clockwise direction.

10 In geodetic surveying the curvature of the earth is also considered.

II Write short notes on any FIVE **(5x2=10)**

1 Magnetic meridian

2 Dumpy level

3 Cross staff

4 Local attraction

5 Prismatic compass

6 Road drainage

7 Trough compass

III Answer any FIVE **(5x4=20)**

1 Theodolite surveying

2 Intersection method in plane table surveying

3 Rise and fall method in leveling

4 Explain the sources of errors in compass surveying.

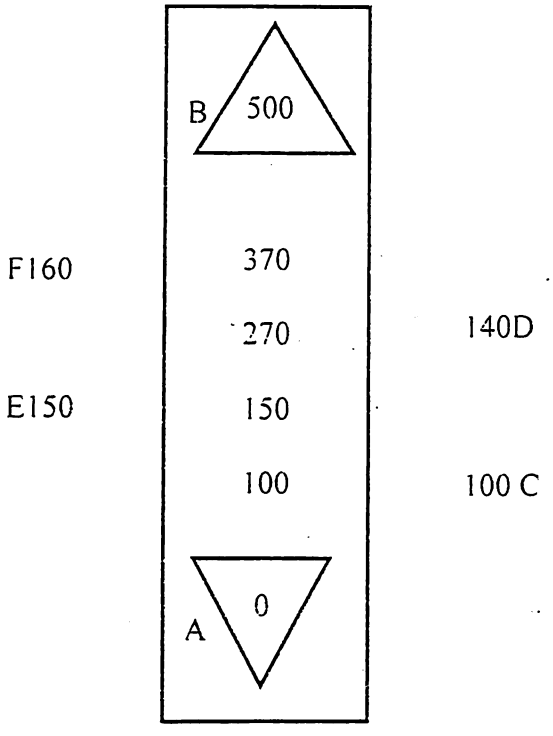
5 What is meant by ranging out a survey line and explain how you would range a line between two points which are not intervisible?

6 Explain the methods of orienting the plane table.

7 Calculate the earthwork in excavation for a pit having length 5m. width 2m and depth 1.8m.

IV Write essay on any ONE **(1x10=10)**

1 Plot the cross staff survey of a field ACDBFE from the field book measurements given below and determine the area of the field.



2 The following consecutive readings were taken with a level and a four metre leveling staff on a continuously sloping ground. 0.675, 1.450, 2.345, 3.455, 0.375. 1.265, 2.650. 2.940. 3.455. 0.325. 1.505. 1.755. 2.675. 3.765. The first reading was taken on a bench mark whose RL is 150 m. Rule out a page of the level field book and enter the above readings. Calculate the reduced levels of the stations and apply the arithmetical checks.

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