

KERALA AGRICULTURAL UNIVERSITY
B.Sc (Hons.) Forestry 2013 Admission
Vth Semester Final - Examination- Feburary-2016

Cat. No: Fmau.3109

Marks: 50.00

Title: Forest survey and Engineering (1+1)

Time: 2 hours

I Match the following

(10 x 1=10)

- | | |
|---------------------------|-----------------------------------|
| 1. Differential levelling | A. Angle |
| 2. Theodolite | B. Same reduced level |
| 3. Plan | C. Setting out right angles |
| 4. Contour line | D. Elevation difference too high |
| 5. Plane table surveying | E. Scale is small |
| 6. Optical square | F. Stream bank protection |
| 7. Spur | G. Base line |
| 8. Map | H. Graphical method |
| 9. Chain surveying | I. Horizontal and vertical angles |
| 10. Compass | J. Scale is large |

II Write short notes on any FIVE questions

(5 x 2=10)

1. Bench mark
2. Contour interval
3. Whole Circle Bearing
4. Parallax
5. Cross staff
6. Check dam
7. Fore bearing and Back bearing

III Write short essay on any FIVE questions

(5 x 4=20)

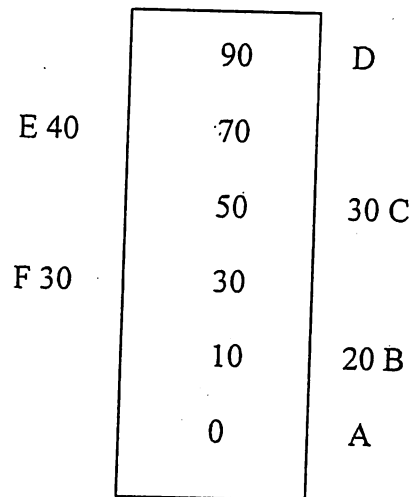
1. What are the accessories in plane table surveying? Explain their uses
2. Distinguish between Simple levelling and Differential levelling
3. Distinguish between True Meridian and Magnetic Meridian
4. List the different types of bridges. What are the points to be considered while selecting a site for a bridge?

5. The distance between two points measured along a slope is 450 m. Find the horizontal distance between them if the difference in elevation between them is 45 m.
6. The bearing of a line AB is $134^{\circ} 18'$ and the angle ABC is $112^{\circ} 38'$. What is the bearing of BC?
7. Explain any two methods to layout right angles.

IV. Answer ANY ONE of the following.

(1 x 10 = 10)

1. Plot the following cross staff survey of a field and calculate its area ABCDEFA.



2. Find out the reduced levels of stations 2 to 7 and apply the usual arithmetic checks.

Stations	Readings (m)			Reduced level (m)	Remarks
	Back sight	Int. sight	Fore sight		
1	1.895			100.000	Bench Mark.
2		1.645			
3		2.890			
4	0.950		3.015		Change Point
5		1.525			
6		1.790			
7			0.690		