

EASTERN UNIVERSITY, SRI LANKA
THIRD YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE – 2012/2013
(November - 2015)

AE 3201 - FARM STRUCTURES AND ELEMENTARY SURVEY

Repeat Special Examination

Practical Examination

Answer all questions

Time: Two hours

1. a. Briefly explain the sources and types of errors in surveying. (50 marks)
- b. List out the advantages and disadvantages of GPS surveying in the agricultural field. (50 marks)
2. a. List out the accessories used in plane table surveying. (50 marks)
- b. Briefly discuss the following operations in setting up the plane table:
i. Centering
ii. Levelling
iii. Orientation (50 marks)
- 3 a. Briefly explain the technical aspects of the “Levelling Staff” in obtaining reading. (50 marks)
- b. Following is a page of a level field book. Calculate the reduced level of the points using Rise and Fall method. (50 marks)

BS – Back sight, FS – Fore sight, IS – Intermediate sight, BM – Bench mark, CP – Change point, LP – Last point

P.T.O

Station	BS	IS	FS	Reduced level	Remarks
1	3.250			250.0	BM
2	1.755		4.000		CP
3		1.950			
4	3.840		1.920		
5		2.340			
6		1.340			
7	1.850		2.185		CP
8			1.575		LP

4. a. Assume that you have been assigned to construct a concrete floor of 4.0m x 4.0m x 0.07m dimension by using the following instructions:

- Use a nominal mix of 1:2:4
- 50 kg of cement is equal to 37 Lit.
- Bulk density of the sand is 1450 kg/m³
- Bulk density of the stones is 1600 kg/m³

Calculate the amount of materials needed for the above concrete floor.

(20 marks)

b. Briefly discuss about the applications of contour surveying.

(80 marks)
