

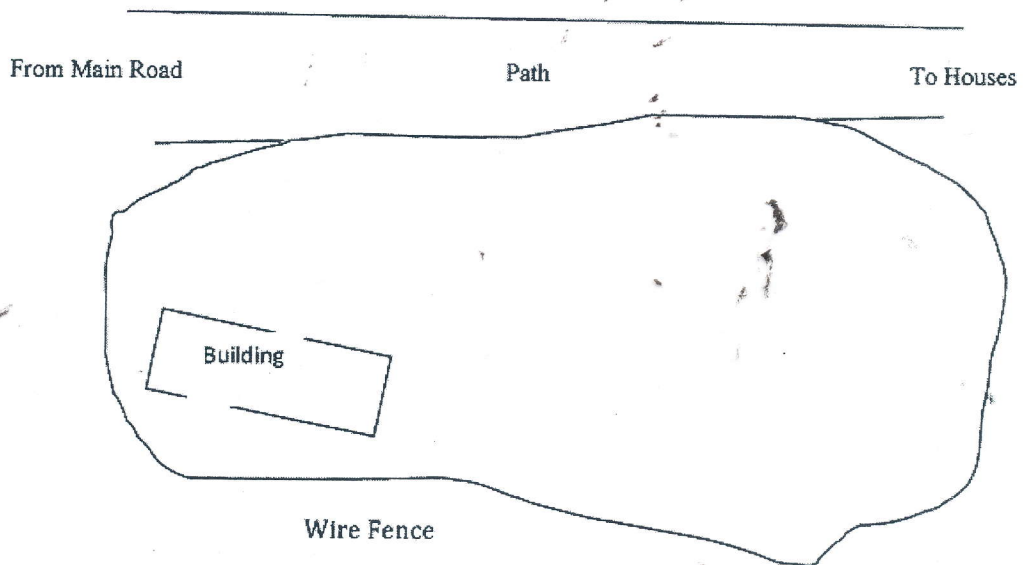
EASTERN UNIVERSITY, SRI LANKA  
THIRD YEAR SECOND SEMESTER EXAMINATION IN AGRICULTURE – 2009/2010  
(Jan/Feb/March 2012)

AEN 3202 - FARM STRUCTURE AND ELEMENTARY SURVEY (2:15/30)  
(Practical Examination)

Time: Two hours  
Answer all questions



1. (i) List out the instruments, which are used in Chain Surveying.
- (ii) List out the errors in Chain Surveying.
- (iii) What are the factors to be considered during the selection of survey stations?
- (iv) Using the following figure select the surveying station in suitable places and select and draw the chain line, base line and check line in most suitable way.



2. I) What are the usages of a theodolite in Surveying?

ii) Briefly explain the steps to fix a theodolite over a survey station?

iii) The offsets from survey stations P, Q is given below.

Chain Length(m)	Left offset (m)	Right offset (m)
4.20	0.50 Side foot path	
6.70	0.3 Side foot path	
8.50	Side foot path meet the chain line	
10.50		0.60 Side foot path
12.80		1.30 Side foot path
18.40	4.10 wire Fence	
22.80	3.6 wire Fence	
30.30	2.0 Jack tree	
44.20	1.0 Mango tree	

The bearing of the line PQ is  $60^{\circ} 25' 10''$ . The length of line PQ is 48.35. Cement pickets are used for P and Q. The length of the chain is 50 m. The cement pickets are used for surveying stations. Please draw a field book containing these details.



3. i) List out the instruments used in leveling?

ii) List out the applications in leveling?

iii) Level book page is given below. Reduce the level by using Rise and Fall Method.

நிலையம்	பின்பக்கம் BS	இடைநோக்கு IS	முன்பக்கம் FS	ஏற்றம் Rise	இறக்கம் Fall	Reduced Level	Remark
A	0.865	-				500.000	பீடக்குறி BM
B	1.025	-	2.105				
C	2.23	-	1.865				
D	2.355	-	2.835				
E			1.76				
Check							

iv) Level book page is given below. Reduce the level by using Height of the instrument method.

நிலையம்	பின்பக்கம் BS	இடைநோக்கு IS	முன்பக்கம் FS	Hight of the Instrume nt	Reduced Level	Remark
A	0.865	-			500.000	பீடக்குறி BM
B	1.025	-	2.105			
C	2.23	-	1.865			
D	2.355	-	2.835			
E			1.76			
Check						