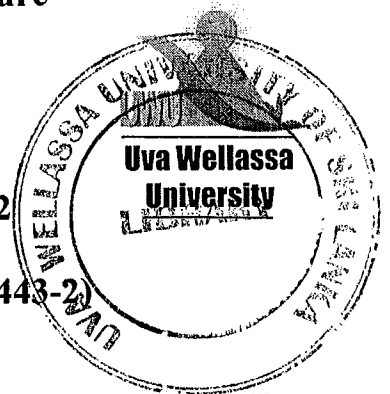


Uva Wellassa University
Faculty of Animal Science & Export Agriculture
BSc in Export Agriculture

Year IV Semester I

End Semester Examination – Feb/Mar 2012

Applications of GIS and Remote Sensing (EAG 443-2)
-Repeat-



Total four (04) questions

Answer **all** questions

Time allocated: Two (02) hours

Marks allocated: 100%

Question 1 (25 marks)

- (i) Describe how you indicate a position on earth's surface using global coordinates (latitude/longitude).
- (ii) What are the features you observe on a topographic map?
- (iii) Describe scales of maps.
- (iv) If the map distance between points A and B on a 1:50,000 scale topographic map is 4 cm, what is the ground distance between A and B in kilometers?
- (v) What is the map distance between points X and Y on a 1:10,000 scale map if they are 1 km apart on the ground?

Question 2 (25 marks)

- (i) Satellite images often need to be enhanced before interpreting them. Explain why.
- (ii) Briefly describe following image processing methods.
 - (a) Contrast enhancement by linear stretching
 - (b) Spatial enhancement by filtering
 - (c) Color compositing

Question 3 (25 marks)

- (i) Describe common functionalities of GIS.
- (ii) Describe "Boolean Logic" method used in GIS analysis.
- (iii) What are the advantages of "Index Overlay" method over "Boolean Logic" method?

Question 4 (25 marks)

Discuss how you would use GIS to identify the most suitable areas for cultivating a selected crop in a given region. Describe the parameters you would consider and explain how they will be incorporated in the GIS analysis.