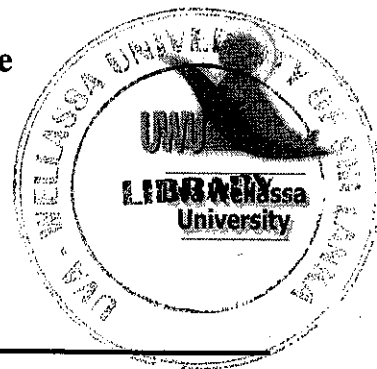


Uva Wellassa University
Faculty of Animal Science & Export Agriculture
BSc in Export Agriculture
End Semester Examination – Aug./Sep. 2011
Year II Semester II



Introduction to GIS (EAG 243-0)

Instructions

Answer **all** questions

No. of questions : Four (04)

No. of pages : Two (02)

Time allocated : One hour (1 hr)

Total marks allocated : 100

01. (a) “Map is a representation of the real world phenomena in symbolic form”. Explain this statement.

(b) What are the essential features of a topographic map?

(c) Discuss the types of maps and their uses in any selected agricultural project that employs GIS techniques.

(25 marks)

02. (a) Suppose that you are navigating in a flat terrain with the help of a topographic map of 1 : 10,000 scale. If you plan to travel along a straight road from point A to point B which are 25 cm apart on the given map, how many kilometers will you travel?

(b) Your hand-held GPS receiver shows the grid coordinates (226600 E, 155670 N) at point X and (230600 E, 158670 N) at point Y while you are conducting a field study. What is the shortest distance between points X and Y?

(c) Calculate the map distance (in centimeters) between above points X and Y on a 1:50,000 scale map.

(25 marks)

03. (a) Show the following landforms using sketch contours. Label the index contours for reference.

i. Conical hill

ii. Gentle and steep slopes

iii. V-shaped valley

iv. Ridge

(b) Describe global/geographic coordinate system and planar coordinate systems.

(25 marks)

04. (a) Discuss different functions of a Geographic Information System.

(b) Describe how GIS operates with other interrelated software.

(c) You have been given following digital maps of an area for a GIS analysis.

Polygon maps - soil types, forests, lake/tanks, administrative divisions
Segment/line maps - roads, railways, streams/rivers, contours
Point maps - nitrate concentration in wells, rainfall, soil pH

Explain how you would organize the above thematic layers to produce a map view and a layout in ArcView GIS environment.

(25 marks)

- END -