

Uva Wellassa University
Faculty of Animal Science & Export Agriculture
BSc in Aquatic Resources and Technology



End Semester Examination – February/March 2011
Year II Semester I

AQT 251-1: GIS and Remote Sensing Applications in
Fisheries and Aquaculture

Instructions

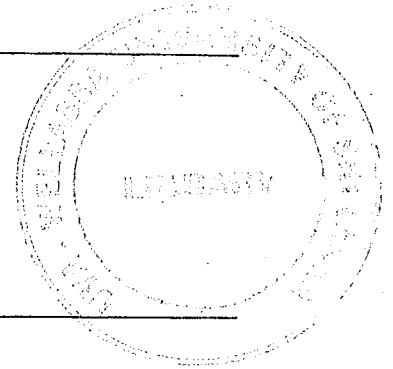
Answer **all** questions

No. of questions : Four (04)

No. of pages : One (01)

Time allocated : One hour (01 hr)

Total marks allocated : 100



1. (i) Describe the basic features of topographic maps.

(ii) Calculate the total area (in square km) covered by a topographic map if its corner coordinates have following values.
Bottom left (southwest) – 200000m E, 175000m N
Top right (northeast) – 240000m E, 200000m N

(iii) If the scale of the above map is 1:50,000 what is the shortest distance on the map (in cm) between its western and eastern margins?

2. Write illustrated notes on the followings.
 - (i) Method of multi-spectral satellite image acquisition
 - (ii) Calculation of Normalized Differential Vegetation Index (NDVI) using Landsat TM data

3. Explain the interactions that take place when electromagnetic radiation from the sun is incident on earth's surface objects. Describe how they affect the appearance of satellite images.

4. Discuss the spectral reflectance characteristics of water when it has suspended matter and plankton. Explain how you would use them in aquatic resource studies.

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