

EASTERN UNIVERSITY, SRI LANKA  
FINAL YEAR FIRST SEMESTER EXAMINATION IN AGRICULTURE  
– 2013/2014 (September 2015)

AE 4101 – METEOROLOGY AND GEOINFORMATICS

Practical Examination (Paper-2 for 3<sup>rd</sup> group)

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Answer all question

Time: 2 Hours

NOTE:

- All required data for the practical examination is uploaded in the following directory *D:\PRL\_data\Exam* in your computer.
  - The answer should be saved in the folder with your index number in the desktop.
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1. Fulfilling the following requirements.

- a. Export data Kurunegala District from DSD layer as Kurunegala.shp.
- b. Full extent to the Kurunegala layer and Change the colors as *Olive* and outline width 1.0.
- c. Book mark the KULIYAPITIYA WEST divisional secretariat division from Kurunegala layer in the scale of 1:125,000.
- d. Change the symbole to Town layer as “square 2” and size 10.

(50 Marks)

2. Using GIS techniques to create maps as Symbolizing and Labeling features.

- a. Categorize Unique Value in D.S.Division level for an Area field from Kurunegala layer.
- b. Put the labels to D.S.Divisions, Placement Properties of the labels *always horizontal* and *only place label inside polygon*.
- c. Ensure the labels’ size 10 and color in *Black*.
- d. Export Map as JPEG file.

\*save the map document as Q2.mxd file and remove the all layers from Table Of Contents (TOC) before enter the next question.

(50 Marks)

3. Creating maps through spatial query technique using Town and District layers.

- a. Export data Matale District as shapefile and save it as Matale.shp.
- b. Find Towns within the Matale District and create a new data as shapefile in the name **Matale\_town.shp**.

- c. Zoom to extend of the newly created *Matale\_town* layer and Export it as Q3.jpeg and save as Q3.mxd files.

(100 Marks)

4. Create a hypothetical map using georeferencing and digitizing techniques (save the map document as Q4.mxd file)

- a. Add District.shp file and Chenkalady.jpg raster file  
 b. The known points are given below, Make georeference the Chenkalady.jpg file and rectify it.

Points	X	Y
1. Upper Right corner	295000	290000
2. Lower Left corner	285000	285000
3. Lower Right corner	295000	285000
4. Upper Left Corner	285000	290000

- c. Create data features and digitizing the following requirements within the circle limit on georeferenced data.

- i. Main roads and railway track (feature name as Road.shp)  
 ii. Forest land (feature name as Forest.shp)  
 iii. Schools (feature name as School.shp)

(100 Marks)