# RAJARATA UNIVERSITY OF SRI LANKA
## FACULTY OF APPLIED SCIENCES

**B.Sc. (Special) Degree in Applied Biology**
**Fourth Year – Semester I Examination – October/ November 2017**

### BIO 4306– INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS

**Time: Three (03) hours**

Answer <u>six (06)</u> questions only.

1. a) Explain the importance of GIS in the field of your specialized subject area.
**(50 marks)**

   b) List **three (03)** areas of GIS applications and explain their importance in disaster mitigation.
**(50 marks)**

2. a) Explain the difference between attribute and spatial Data in GIS, using appropriate examples.
**(50 marks)**

   b) Describe the difference between **raster** and **vector** data in GIS.
**(50 marks)**

3. a) An aerial photograph is taken from a height of 3000 m. by a camera of focal length 50 mm. Calculate the scale, assuming that the area photographed is at sea level.
**(50 marks)**

   b) Estimate the area of land covered by a standard size (23 cm X 23 cm) aerial photograph, using the above scale.
**(50 marks)**

4. "Maps are ways of communication". Justify this statement giving suitable examples.
**(100 marks)**

5. Give the meaning of the following terms:     **(25x4 =100 marks)**

   a) TIN

   b) DEM

   c) 3D Model

   d) Data Input Techniques.

6. Explain any **four (04)** functions of Geoprocessing tools in GIS.     **(100 marks)**

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