



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES, MIHINTALE**

B.Sc. (Four - Year) Degree in Applied Sciences

Fourth Year Semester I Examinations – June/July 2018

BIO 4306 - INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS

Time: Two (02) hours

Answer ALL questions.

1. a) State various types of input techniques and GIS data. **(40 marks)**

b) Give **five (05)** attributes of each of the following institutes that use GIS.
 - i) Disaster Management Center
 - ii) Metrological Department
 - iii) Geological Survey and Mines Bureau**(40 marks)**

c) Explain the term “Moving window averaging” **(20 marks)**

2. a) Describe how geographic integration of information is carried out during implementation of a GIS data model **(40 marks)**

b) What is meant by (i) Projection (ii) Accuracy (iii) Scale and (iv) Resolution **(20 marks)**

c) Discuss the terms spatial and attribute data with suitable examples **(40 marks)**

3. a) Compare and contrast between raster and vector data models. **(10 marks)**

b) Explain with illustrations raster data storage methods. **(10 marks)**

c) Give a detailed account on spatial relationships. **(05 marks)**

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4. a) Write the definition of remote sensing as given by Lillesand and Kiefer, 1994 (05 marks)
- b) State the fields of application in remote sensing (Give **five (5)** fields) and describe one of the fields with appropriate examples. (10 marks)
- c) Briefly explain **three (03)** types of remote sensing methods. (10 marks)

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