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

B.Sc. (Special) Degree in Applied Science
Fourth Year – Semester II Examination – Oct/Nov 2015

BIO 4311- Advanced Geographic Information Systems

Answer all (3) questions

Time: One and a Half hours

1. (a) Describe the “GIS data models” for “Vector and Raster” based on data base management systems (DBMS) [40 marks]
(b) Explain the raster data structures concepts [30 marks]
(c) Using examples discuss the “Tesselations” in Raster data structures [30 marks]
2. (a) In detail discuss the “Contributing disciplines and technology” for GIS with examples as appropriate [70 marks]
(b) Explain the reasons for considering GIS as an important tool [15 marks]
(c) Explain the importance of GIS in research applications [15 marks]
3. (a) Give a brief description on Remote Sensing [20 marks]
(b) Describe the “Data collection” by remote sensing with illustrations [50 marks]
(c) Explain the Advantages and limitations of satellite observation [30 marks]