

**Uva Wellassa University of Sri Lanka**  
**Faculty of Science and Technology**  
**Department of Science and Technology**  
**300 level 2<sup>nd</sup> semester Examination – Jun./Jul. 2017**  
**MRT 327-2 Remote Sensing and Geographic Information Systems**



**Instructions to candidates**

Duration: Two (02) hours  
Number of questions: Four (04) essay questions  
Answer all questions  
Mark allocation: 100

1. Write short notes on the following.
  - a. Passive Remote Sensing
  - b. DEM data
  - c. Sun-Synchronous satellites
  - d. Vector data
  - e. Spatial resolution

(25 mark)
  
2.
  - a. Define spectral signature.
  - b. Briefly describe methods of energy transfer from the Sun to the Earth.
  - c. Explain the application of spatial data in mineral exploration.

(20 mark)
  
3.
  - a. Define and differentiate between panchromatic, multispectral and hyperspectral sensors.
  - b. Briefly discuss GIS functions.

(25 mark)
  
4.
  - a. Why is the datum important in GIS?
  - b. Explain importance of map projection.
  - c. List three types of map projections.
  - d. Solar radiation is scattered by the atmosphere. Explain the three types of scattering processes that occur.

(30 mark)

