



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR SCIENCE IN EARTH SCIENCE WITH
INFORMATION TECHNOLOGY**

MAIN CAMPUS

NGA 106: IMAGE INTERPRETATION TECHNIQUES

Date: 21st April, 2016

Time: 2.30 - 4.30 pm

INSTRUCTIONS:

- Answer question ONE and any other TWO questions.
- Sketch maps and diagrams should be used whenever appropriate.



NGA 106: IMAGE INTERPRETATION TECHNIQUES

1. (a) Define the following terms
 - (i) Remote sensing 3 marks
 - (ii) Replicability 2 marks
- (b) Examine any five elements of manual image interpretation that can be used to distinguish between a natural forest from a tea plantation. 15 marks
- (c) Explain the difference between manual image and digital image processing. 10 marks
2. Discuss two applications for each of the following image data.
 - (a) Black and White aerial photos 4 marks
 - (b) Colour infrared photographs 4 marks
 - (c) Radar images 4 marks
 - (d) UV photographs 4 marks
 - (e) Thermal images 4 marks
3. (a) Explain the use collateral materials in enhancing image data interpretation 10 marks
- (b) Examine the operations of SPOT satellites in relation to earth observation. 10 marks
4. Discuss methods used in the classification of digital images. 20 marks
5. (a) Explain the procedure for image rationing and its importance in the study of vegetation. 10 marks
- (b) Discuss two methods used in the enhancement of digital image data. 10 marks
6. Explain the procedure of stereoscopic viewing of aerial photographs. 20 marks