

**DEPARTMENT OF GEOGRAPHY,  
SCHOOL OF NATURAL AND APPLIED SCIENCES  
FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA  
FIRST SEMESTER EXAMINATION, 2012/2013 SESSION  
COURSE: REM 313 (OPTICAL SYSTEMS)**

**INSTRUCTION:** Answer any Four (4) Questions. Credit will be given for the use of specific relevant examples

**TIME ALLOWED: 2 HOURS**

1. Discuss any two (2) of the following current trends in remote sensing technology.
  - (a) Hyperspectral sensing
  - (b) MODIS
  - (c) LIDAR
  
2. With the aid of a well labeled diagram compare and contrast between push broom and whisk broom mode of image acquisition.
  
- 3.(a) Describe the procedure for processing a coloured film.
  - (b) Explain the function of the following component of a camera.
    - i. Lens
    - ii. Aperture
    - iii. Filter
  
4. Distinguish between multispectral scanning and photographic sensors.
  
- 5.a. Define a sensor.
  - b. List four (4) types of sensors and explain any two.
  
6. Discuss the importance of cameras/aerial photography in remote sensing.