

**FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA**  
**SCHOOL OF SCIENCE AND SCIENCE EDUCATION**  
**DEPARTMENT OF GEOGRAPHY**  
**FIRST SEMESTER 2012/2013 SESSION UNDERGRADUATE**  
**EXAMINATION**

**COURSE CODE:** REM324P (3units)

**COURSE TITLE:** Advanced Digital Image Processing

**INSTRUCTIONS:** Answer question **2** and any other **two (2)** questions of your choice. Credit will be given for the use of specific examples and appropriate diagrams.

**TIME ALLOWED:** 2 1/2 Hours

1. Discussed in details the elements of image interpretation
2. Discussed the steps involved in digital image processing of Quickbird  
Satellite image of FUT Minna, Bosso Campus.
3. Expatiate on any four of the following:
  - a. Principal Components Analysis (PCA)
  - b. Contrast Stretching
  - c. Histogram Equalisation
  - d. Spatial Filtering
  - e. Hue Saturation and Intensity (HSI)
4. Classification techniques are of different types. Distinguish between them.
5. Discuss the factors governing the quality of an Image.