FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF SCIENCE AND SCIENCE EDUCATION
DEPARTMENT OF GEOGRAPHY

FIRST SEMESTER 2009/2010 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: REM 415P (3 Units)
COURSE TITLE: Geographic Information System
INSTRUCTIONS: Answer **Qn. (1)** and any three others (four questions in all). Credit will be given for the use of specific examples and appropriate diagrams.

TIME ALLOWED: 3 Hours

1. Discuss the application of GIS in any one (1) of the following fields:
    (i)   Transportation Network Management
    (ii)   Land Information System
    (iii) Mapping earth surface elevations

2. (a)   What is Geographic Information?
    (b)   Outline the disadvantages of printed maps and the advantages of computer-assisted mapping.

3. Discuss the Major Trends and Future of GIS.

4. Describe and discuss briefly, the Raster and Vector data structures, giving the advantages and disadvantages of each.

5. Discuss how spatial and Non-spatial data are entered into the GIS environment.

6. Explain any four (4) of the following statistical analysis methods used in GIS:
    (i)   Proximity analysis
    (ii)   Contiguity analysis
    (iii) Connectivity analysis
    (iv)   Optimal route analysis
    (v)   Interpolation and Contouring