



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**Plot 91, Cadastral Zone, NnamdiAzikwe Expressway, Jabi, Abuja**  
**FACULTY OF SCIENCES**  
**DEPARTMENT OF ENVIRONMENTAL SCIENCE**  
**COURSE CODE: EMT 409 CREDIT UNIT: 2 TIME: 2:30MINS**  
**POP EXAMINATION 2022\_2**  
**COURSE TITLE: GEOGRAPHIC INFORMATION SYSTEM**

**Question 1 and any other 3. Question 1(25 marks) and others (15marks)**

**1a). Using a well labelled diagram show how data can be integrated using GIS (10marks)**  
**1b). Give an overview of the uses and applications of GIS in our society and daily lives (15marks)**

**2a). List the characteristics of the fields in an attribute database (2marks)**  
**2b). Geographical features have some characteristics which the GIS technology uses to manipulate geographical data, discuss. (13marks)**

**3a). Define data editing(1mark)**  
**3b). In a tabular form differentiate between manual digitizing and automatic scanning (14marks)**

**4). Discuss the following hardware components of a GIS (15marks)**  
**Computer(4marks)**  
**Input Devices(7marks)**  
**Storage devices(1mark)**  
**Output devices(3marks)**

**5a). Explain how an electronic scanner can be employed in the digitization or conversion of existing paper-based records, plans, maps and charts to digital format(7marks)**

**5b). Outline the traditional grouping of geographic features based on their geometric dimensions(4marks)**

**5c). List the key considerations that must be taken in discussing or determining the GIS procedure in any organization. (4marks)**

**6a). Outline why cartographic application is the foundation of GIS(3marks)**

**6b). Write on map production and map making as cartographic functions of GIS (12marks)**