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**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**Plot 91, Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja**

**FACULTY OF SCIENCES**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT**

**JULY EXAMINATIONS 2107**

**COURSE CODE: ESM 407 TIME: 2:30mins**

**COURSE TITLE: GEOGRAPHIC INFORMATION SYSTEMS (3 units)**

**INSTRUCTION: Attempt Question 1 and any FOUR questions**

1. (a) State the major questions that geographical information system (GIS) can seek to answer. (6mks)

(b) Mention FOUR GIS softwares which have interrelated subsystems or modules (8mks)

(c) Identify FOUR spatial entities and their geographical features (8mks) (22marks)

2a. With appropriate examples, discuss the essential features of GIS (8marks)

2b. Define GIS (8marks)

3a. Highlight the factors responsible for the growth of GIS (8marks)

3a What are the challenges of GIS (8marks)

1. Provide a historical background to the science and technology of Geographic Information Systems. (12marks)

5a. Discuss at least any five (5) definitions of GIS techniques (8marks)

5b.Which of these definitions do you cherish most and why (4 marks)

6a. Discuss the qualities of a good storage device for GIS data. (8marks)

6b. Mention any 4 storage devices (4 marks)