COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

NANR304: GEOGRAPHICAL INFORMATION SYSTEMS

END OF SECOND SEMESTER FINAL EXAMINATIONS

APRIL 2022

LECTURER: MS. B. BOLO

DURATION: 3 HOURS

INSTRUCTIONS

Do NOT write your name on the answer sheet.

Answer (fully) questions.

Begin your answer for each question on a new page.
Credit is given for neat, well-written and lucid work.

Answer ALL Questions in Section A

Answer ANY TWO Questions in Section B

SECTION A [COMPULSARY]

Section A: [50 MARKS]

1. Discuss in details the difference between Geographical Information System (GIS) open source software and commercial software. Give examples for each. **(6)**

2. Explain in detail why GIS is unique? **(5)**

3. What is the difference between latitudes and Longitudes geographic coordinates? **(4)**

4. In GIS, a raster data and vector data are presented in different format? Describe raster and vector data formats in details. **(10)**

5. GIS has experienced a huge development since its early days, with the popularization of GIS technologies integrated with other disciplines such as natural resources, explain in details with examples its use for monitoring and management of natural resources. **(25)**

SECTION B [CHOOSE TWO QUESTIONS]

Section B: [50 MARKS]

1. Explain three main types of map projections, illustrate in diagrams. **(25)**

2. Describe the major five main GIS functions? **(25)**

3. What disciplines and applications have had the greatest influence on the development of GIS technologies? **(25)**

4. Assume that the manager of Natural Resources and Management Department where you are employed frequently heard the term GIS. He/She knew you studied GIS at Africa University and asks you to explain to the team and gave you an assignment to implement the system. What is your answer and how would you go about implementing the system? **(25)**

End of Examination Paper