



PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BSIT309

COURSE TITLE: GEOGRAPHICAL INFORMATION SYSTEMS

CAMPUS: ROYSAMBU

EXAM DATE: TUESDAY, 3RD DECEMBER 2024

TIME: 6:00PM-9:00PM

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other THREE questions in Section **B**.
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

Section A (Compulsory)

Question One

- a) Spatial features can be represented in three ways on a map. Examine the three representations. **[3 Marks]**
- b) As a GIS student, you are tasked to design a map of Pan Africa Christian University. Using your knowledge from 1 (a) above, describe the various campus spatial features you would like to show in the map. **[3 marks]**
- c) Using examples, differentiate between raster and vector geospatial data formats. **[4 Marks]**

Section B (Answer any 3 Questions)

QUESTION TWO

- a) Describe two dimensions of data used in GIS. **[2 Marks]**
- b) Examine the historical developments of GIS as a key sub discipline of Geography and Information Technology. **[4 Marks]**
- c) Discuss four components that make up full Geographical Information Systems. **[4 Marks]**

QUESTION THREE

- a) Examine the limitations of GIS use in developing countries. **[2 Marks]**
- b) Describe the steps that are followed when modeling reality within a GIS environment. **[4 Marks]**
- c) Discuss two sources of errors causing inaccuracy and imprecision in GIS data **[4 Marks]**

QUESTION FOUR

- a) Examine two issues to be considered when scanning maps for use in GIS. **[2 Marks]**
- b) Discuss two major types of referencing systems in GIS. **[4 Marks]**
- c) Using examples, analyze the application of GIS to environmental planning. **[4 Marks]**

QUESTION FIVE

- a) Explain the concept “projection” and why it is important in GIS. **[2 Marks]**
- b) Evaluate two benefits of using a database for GIS attribute data management. **[4 Marks]**
- c) Remote sensing data is considered valuable for many GIS applications. Discuss two major technologies for remote sensing. **[4 Marks]**

QUESTION SIX

- a) Using examples, examine any two geospatial analyses performed in GIS. **[4 Marks]**
- b) Analyze three factors that must be considered when choosing data for use in Geospatial applications. **[6 Marks]**

-EOF-