JARAMOGI OGINGA ODINGA UNIVERSITY

OF SCIENCE & TECHNOLOGY

UNIVERSITY EXAMINATIONS 2012/2013

2ND YEAR 1ST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF ARTS IN SPATIAL PLANNING

(REGULAR)

COURSE CODE: PSP 3214

COURSE TITLE: GEOGRAPHIC INFORMATION SYSTEM

DATE: 21/8/2013 **TIME: 2.00-4.00 PM**

DURATION: 2 HOURS

INSTRUCTIONS

1. **This paper consists of 5 Questions.**
2. **Answer Question 1 (Compulsory) and any other 2 questions.**
3. **Write your answers on the answer booklet provided.**

Question One

a) Explain the following as used in Geographic Information Systems:-

i. Vector data structure. (5 marks)
ii. Raster data structure. (5 marks)

b) Using illustrations discuss the functions of hardware components of a Geographical Information System. (10 marks)

c) Discuss the application of Geographical Information System in Spatial Planning. (10 marks)

Question2

a) Describe and illustrate the topological features as used in a Geographical Information Systems. (10 marks)
b) Use the broken down map graphic features (figure 1) to build relevant tables. (10 marks)

Question 3

a) You have been presented with a computer system with Arc Desktop in the GIS laboratory. Explain the role of arc catalogue as used in the ArcGIS programme. (10 marks)

b) In the process of data entry, you are presented with geographical data of five locations in a spread sheet format. Explain the procedure of projecting such data in Arc map.

(10 marks)

Question 4

Geographic Information Systems are viewed as, “Super systems”. Discuss this with respect to other Information Systems. (20 marks)

Question 5

a) Using illustrations describe Geographical Information Systems database architecture.

(10 marks)

b) Explain the strengths and weaknesses of the database approach to data management.

(10 marks)