



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

PUBLIC HEALTH/COMMUNITY HEALTH AND DEVELOPMENT

2nd YEAR 1ST SEMESTER 2019/2020 ACADEMIC YEAR

KISUMU CAMPUS

COURSE CODE: PSP 3214

COURSE TITLE: GEOGRAPHICAL INFORMATION SYSTEM

DATE: 15/08/2019

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2.00 HOURS

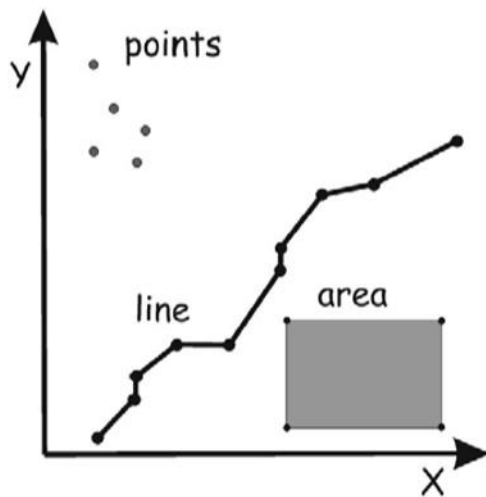
Instructions:

- 1. Answer all the questions in Section A and 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

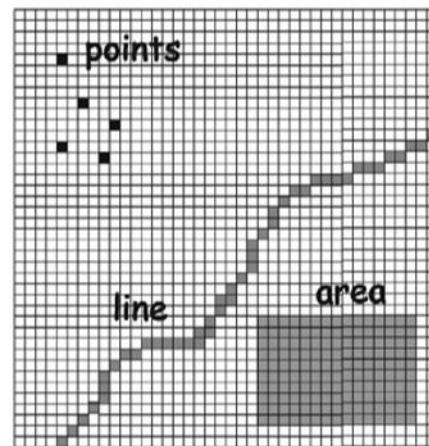
SECTION A

Answer all the questions in Section A (30MARKS)

- Define Geographic Information System (GIS) (2 marks)
- What is the relationship between Remote Sensing and GIS? (2 marks)
- List five sources of GIS data. (5 marks)
- Using a sketch of a wave, differentiate between frequency and wavelength. (4 marks)
- As a Community or Public Health officer, list four applications of Geographic Information System in your profession. (4 marks)
- Study the figures A and B below and answer the following questions.



A



B

- Which types of spatial data are represented by A and B above? (2 marks)
 - Highlight two advantages and two disadvantages of each spatial data type in question (i) above. (4 marks)
- g) Briefly explain the following
- Passive sensor
 - Active sensor (4 marks)
- h) State three factors which describe how good a GIS data is. (3 marks)

SECTION B 40 (MARKS)

Answer any Two questions in this Section (Each Question 20 MKS).

QUESTION TWO (20 MARKS)

- a) Briefly discuss the five components of GIS. (10 marks)
- b) Describe the different elements of image interpretation? (10 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the two categories of image classifications. (6 marks)
- b) What are the components of spatial references? (4 marks)
- c) Describe any five angular parameters projection of satellite images. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the major steps in GIS process starting from data collection. (8 marks)
- b) What is GIS software? Briefly explain what it is composed of. (4 marks)
- c) Data in remote sensing and GIS can either be primary or secondary. Describe what the two sets mean and give examples in each. (8 marks)

QUESTION FIVE (20 MARKS)

- a) Describe six broad applications of GIS (12 marks)
- b) Describe three different ways Energy Interact with the atmosphere (8 marks)