INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: BSEM
YEAR/SEM: YEAR 1/SEMESTER 2
COURSE CODE: BSE1205
NAME: REMOTE SENSING AND GIS

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Attempt only ONE question

Question 1:

1. a. Mention the advantages and disadvantages of remote sensing. (10 marks)

   b. Define scattering. (01 mark)

   c. Explain any three forms of scattering. (09 marks)

   d. What is the importance of infrared sensors in remote sensing? (10 marks)

   e. Differentiate between specular and diffuse reflection. (06 marks)

   f. What is unique about active, and passive sensors? (04 marks)

Question 2:

2. a. Explain at least three forms of resolutions in remote sensing. (06 marks)

   b. Describe the components of the GIS system. (10 marks)

   c. State the effects of absorption and refraction in remote sensing. (04 marks)

   d. Define atmospheric window and state its purpose in remote sensing. (03 marks)

   e. How is data acquired in GIS? (05 marks)

   f. Briefly describe the types of remote sensing platforms. (06 marks)

   g. How is vector data type represented in GIS? (06 marks)

SECTION B

Section B question is compulsory

Question 1:

With the datasets provided, generate a map of _____ district indicating major towns, roads, rivers and police stations. The map should bear at least five important attributes. An inset map showing the location of that particular district in Uganda should be generated. All features in the map should be visible with appropriate colours and sizes. A buffer of two kilometres (2 Km) should be created on all police stations.

Reg. Number	District
24/1910/BSEM-S	Kole
23/535/BSEM-M	Otuke
23/610/BSEM-M	Adjumani
24/UG/664/BSEM-S	Kumi
24/UG/004/BSEM-J	Amudat
24/UG/1446/BSEM-S	Kotido
24/353/BSEM-S	Bushenyi
23/435/BSEM-M	Kasese
24/2049/BSEM-S	Masaka
24/UG/1775/BSEM-S Others 1 2 3 4 5	Hoima Pader Kabale Buliisa Nebbi Kaberamaido