



ELIZADE UNIVERSITY

FACULTY OF BASIC AND APPLIED SCIENCES

DEPARTMENT: PHYSICAL AND CHEMICAL SCIENCES

PROGRAMME: APPLIED GEOPHYSICS EXAM TITLE: DEGREE EXAMINATION

COURSE CODE & TITLE: AGY 303: Principles of Remote Sensing & GIS

TIME ALLOWED: 2 hrs

SEMESTER/SESSION: FIRST / 2020/2021

INSTRUCTIONS: Write your matriculation number on the cover page of the exam booklet.

Answer question NUMBER 1 and any OTHER TWO questions.

HOD's SIGNATURE

1. (a) What is 'Remote Sensing'?
(b) With the aid of a diagram, describe the inter-relationship between the components of remote sensing.
(c) Define the following terms: (i) Atmospheric windows (ii) Image (iii) Pixel
(iv) Digital number
(d) State three (3) reasons remote sensing is considered a valuable tool in reconnaissance survey.
(e) Give **three (3)** simple examples of remote sensors.

(24 marks)
2. (a) Highlight five regions of electromagnetic spectrum useful for remote sensing. State the wavelength range of each.
(b) What is a sensor? Name **three (3)** types of passive sensors and **three (3)** types of active sensors.

(18 marks)
3. (a) Discuss "scattering" and "absorption" as forms of energy interaction with the atmosphere.
(b)(i) List **three** types of scattering. Write short note on each.
(ii) State the factors that determine the magnitude of scattering.

(18 marks)
4. (a) Write explanatory notes on the following:
(i) Spatial resolution
(ii) Temporal resolution
(iii) Radiometric resolution
(iv) Spectral resolution
(b) List **four (4)** application areas of GIS. Discuss any **three (3)**.

(18 marks)