



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING

TCV 4415 : GEOSPATIAL TECHNIQUES

END OF SEMESTER EXAMINATION

SERIES: JANUARY 2025

TIME: 2 HOURS

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **four** questions.

Attempt any **THREE** questions.

Do not write on the question paper.

QUESTION ONE - Compulsory

- a) Briefly explain FIVE major functions of GIS. (10 marks)
- b) Define digitizing process in GIS. (2 marks)
- c) Briefly explain the main FOUR processes that can be applied on vector data. (8 marks)

QUESTION TWO

- a) Use of GIS leads to better decision-making in government. Elaborate this statement. (10 marks)
- b) Explain ANY FIVE benefits and applications of satellite images and aerial photographs. (10 marks)

QUESTION THREE

- a) Raster data structure is more suitable for analytical operations. Explain with its advantages and disadvantages. (20 marks)

QUESTION FOUR

- a) Briefly explain FOUR differences between GIS and Remote sensing. **(10 marks)**
- b) Briefly explain FIVE advantages of remote sensing. **(10 marks)**

QUESTION FIVE

- a) Using relevant sketch, describe remote sensing process. **(20 marks)**