



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FOURTH YEAR FIRST SEMESTER

MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN; AGRICULTURE
AND BIOTECHNOLOGY

COURSE CODE: ACR 411

COURSE TITLE: PRECISION AGRICULTURE & ORGANIC FARMING

DATE: 13TH DECEMBER 2023

TIME: 2 – 4 PM

INSTRUCTIONS TO CANDIDATES

Answer Question One and Any other TWO (2)

TIME: 2 Hours

This Paper Consists of 2 Printed Pages. Please Turn Over. ►

KIBU observes ZERO tolerance to examination cheating

QUESTION ONE: (COMPULSORY)

(30 MKS)

- a) List FOUR factors that determine the accuracy of Global Positioning System use in precision agriculture (4 MARKS)
- b) Outline THREE important features a complete Farm Management System (FMS) should provide (6 MARKS)
- c) Define the following terms as applied in precision agriculture
 - i. Remote Sensing (RS) (2 MARKS)
 - ii. Geographic information systems (GIS) (2 MARKS)
- d) Outline THREE challenges of precision agriculture (6 MARKS)
- e) Outline THREE concepts of organic farming (6 MARKS)
- f) List FOUR objectives of precision Agriculture (4 MARKS)

QUESTION TWO

Briefly describe FOUR precision agriculture system elements applied in agriculture (20 MARKS)

QUESTION THREE

Discuss FIVE Benefits of Precision Agriculture in Organic Farming (20 MARKS)

QUESTION FOUR

Discuss FIVE environmental benefits of organic agriculture (20 MARKS)

QUESTION FIVE

- a. Outline FOUR key principles for sustainability of organic agriculture (8 MARKS)
- b. Outline FOUR principles of Organic agriculture (12 MARKS)