

KISII UNIVERSITY
UNIVERSITY EXAMINATIONS

**THIRD YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
SCIENCE IN ANIMAL SCIENCE/ AGRICULTURAL EDUCATION AND
EXTENSION/ AGRICULTURE/ NATURAL RESOURCE MANAGEMENT
SECOND SEMESTER 2023/2024
[JAN – APRIL, 2024]**

AGRO 383: PRINCIPLES OF ORGANIC FARMING

STREAM: Y3 S2

TIME: 2 HOURS

DAY: FRIDAY, 3:00 - 5:00 P.M.

DATE: 05/04/2024

INSTRUCTIONS

- 1. Do not write anything on this question paper.**
- 2. Answer ALL questions in section A (Compulsory) and any other TWO question from section B.**

SECTION A: ANSWER ALL THE QUESTIONS (30 MARKS)

QUESTION ONE: COMPULSORY

- i. Write short notes on the following terms in relation to organic farming
 - a). Characteristics of organic farming (5 marks)
 - b). Harmful effects of conventional farming (5 marks)
- ii. Conceptualize the following with respect to organic farming
 - a). Environmental impacts that have been associated with organic farming (4 marks)
 - b). Conditions under which conventional seed and planting stock can be used in the production of organic crops (6 marks)

C). Importance of minimum tillage in organic production of food crops

(10 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO

i. State how an organic farmer should carry out the following practices in his farm

a). Limit pest colonization

(6 marks)

b). Use cultural tactics to prevent pest infestation in his newly established organic farm

(4 marks)

ii. Discuss the basic principles of Good Agricultural Practices that an organic farmer aiming at exporting his produce should follow

(10 marks)

QUESTION THREE

i. Explain how an organic farm can maximize nutrient use through the principle of “Closed Nutrient Cycle”

(10 marks)

ii. Organic farming emphasizes the use of on-farm products for enhanced productivity. Explain how a progressive organic farmer can produce more biomass for sustainable soil fertility of his farm.

(10 marks)

QUESTION FOUR

i. Getting nutrients that can easily be taken up by plants through compost manure goes through different phases that involve activities of various macro organisms and microorganism. Using the figure below:

a). Identify the composting phases represented by P1, P2, P3

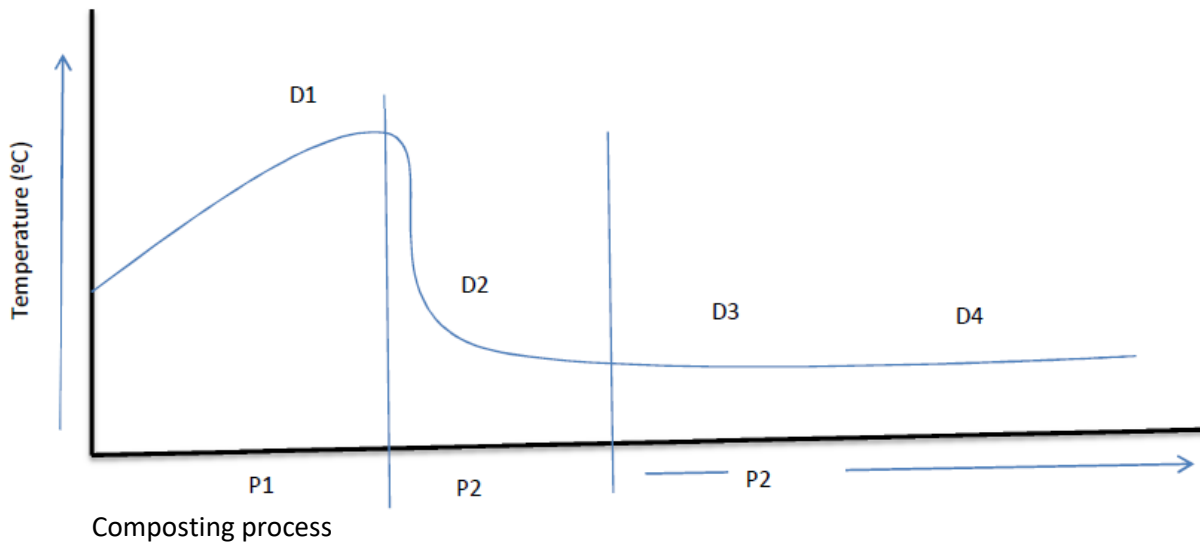
(3 marks)

b). Identify the changes associated with D1, D2, D3 and D4

(4 marks)

c). Illustrate the importance of the soil macro organisms in an organic farm

(3 marks)



- ii. A farmer intending to convert to organic farming must go through “transition” and develop “organic system plan”. Briefly discuss the standards that the farmers going through transition must meet before their produce can be certified as organic. (10 marks)