

P515/2
PRINCIPLES AND PRACTICES
OF AGRICULTURE

PAPER 2
June/July 2022

3 hours

MWALIMU EXAMINATIONS BUREAU

UACE MOCK RESOURCE EXAMINATIONS 2022

PRINCIPLES AND PRACTICES OF AGRICULTURE

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3 Hours

INSTRUCTIONS TO CANDIDATES:

This paper consists of sections **A, B, C** and **E**.

Answer question 1 in section **A** and **four** other questions, selecting one from each of the section(s) **B, C, D** and **E**.

Any additional question(s) attempted will **not** be marked

SECTION A (20 MARKS)

Question 1 is compulsory

1. Figure 1 shows the concentration of DDT in parts per million, at different trophic levels in a food chain. Study the figure and answer the questions that follow:



Fig.1

- a) What conclusion can you draw from the information provided in fig 1 (03 marks)
- b) At what trophic level is DDT likely to have the most effect and why? (02 marks)
- c) Explain how the preying bird might have come to contain DDT (04 marks)
- d) Outline precautions farmers would take to avoid DDT hazards (05 marks)
- e) Describe the qualities of a good pesticide. (06 marks)

SECTION B (20 MARKS)

CROP PRODUCTION

Answer **one** question from this section.

- 2 (a) Outline ways through which crop diseases may be spread. (09 marks)
- (b) Describe the methods that can be used to control crop diseases. (11 marks)
- 3 a) with examples differentiate between complete and incomplete fertilizers. (04 marks)
- b) Explain the factors affecting crop response to fertilizers. (10 marks)
- c) Describe the different methods of fertilizer application. (06 marks)

SECTION C (20 MARKS)

ANIMAL PRODUCTION

Answer **one** question from this section.

- 4 a) Describe the steps followed when processing fluid milk for marketing. (10 marks)

b) Explain the off-flavors in milk (10marks)

5 a) Differentiate between water intoxication and water turn over in farm animals. (02 marks)

b) Explain the factors that influence water turnover in cattle (12 marks)

c) Outline the importance of water to farm animals (06 marks)

SECTION D (20 MARKS)
AGRICULTURAL ENGINEERING.

Answer **one** question from this section

6 (a) outline the importance of farm buildings in farm management (06 marks)

(b) Explain the functional requirements of a building for storage of crop produce. (06 marks)

(d) Describe the procedure of setting up a foundation for a farm building (08 marks)

7 a) a wheel and axle machine has efficiency of 45%. If the radii of the wheel and axle are 20mm and 2mm respectively, find the;

i) Velocity ratio of the machine

ii) Mechanical advantage of the machine

iii) Effort used to lift a load of 1000N.

b) Explain ways through which machines simplify work (08 marks)

c) How can you improve the efficiency of a machine? (06 marks)

SECTION E (20 MARKS)
AGRICULTURAL ECONOMICS

Answer **one** question from this section.

8 a) Discuss measure that can be taken to ensure food security in developing countries (12 marks)

b) Outline problems associated with overpopulation. (08 marks)

9. a) Explain the reasons why farmers should apply for agricultural credit. (12 marks)

b) What measures should financial institutions take to ensure farmers pay back credit. (08 marks)

End