NAME ..... STREAM .....

SCHOOL .....

P515/1
PRINCIPLES AND
PRACTICES OF
AGRICULTURE
Paper 1
AUGUST 2024
2 ½ Hours

UNNASE MOCK EXAMINATIONS 2024

UGANDA ADVANCED CERTIFICATE OF EDUCATION
PRINCIPLES AND PRACTICES OF AGRICULTURE
PAPER 1
TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS TO CANDIDATES:

This paper consists of two sections A and B.

Attempt all questions in both sections A and B.

Section A: ***Write the letter corresponding to the correct answer in the box provided.***

Section B: ***Write answers in the spaces provided.***

FOR EXAMINER'S USE ONLY		
Questions	**Marks**	**Examiner's Signature**
A: 1 – 30		
B: 31		
32		
33		
34		
35		
36		
37		
TOTAL		

SECTION A : (30 MARKS)

1. Which of the following common local farming practices encourages colonisation of striga weed in an area ?

A. Bush burning
B. Late planting
C. Mono cropping
D. Late weeding

2. A hand brace tool is used in the construction of farm structures to:

A. tighten screws in door handles.
B. make holes on the wooden parts.
C. firmly clamp objects during work.
D. remove dirt from wood and later polish the surface.

3. The type of selection where a breeder selects and improves for one characteristic at a time until it reaches acceptable levels is

A. Independent culling
B. Tandem selection
C. Index selection
D. Mass selection

4. Which of the following simple machines is used to lift heavy loads over a short distance ?

A. Inclined plane
B. Lever
C. Pulley
D. Screws

5. In 2020 Mpabuka planted beans in the first season and got a profit of Shs.65,000 after investing Shs.45,000. In the second season of the same year, he planted maize and got a profit of Shs.90,000 after investing Shs.75,000.
What is the overall efficiency of the farmer ?

A. 83.3% **B.** 64.6% **C.** 72.2% **D.** 60%

6. Gender parity in agriculture refers to:

A. The systematic gathering and examination of information on gender differences and social relations.
B. Equal rights, responsibilities and opportunities for men and women.
C. Unfair differences in the treatment of men and women because of their sex.
D. An effort to promote the rights or progress of disadvantaged persons.

7. Which of the following organelles is responsible for protein synthesis in a plant cell ?

A. Mitochondria
B. Endoplasmic reticulum
C. Ribosome
D. Lysosome

8. What is the purpose of the yoke in animal draught technology ?

A. To distribute the load evenly.
B. To provide comfort to the animal.
C. To increase the animal power.
D. To reduce the animal effort.

9. Which stage of photosynthesis produces ATP and NADPH ?

A. Light dependent reactions.
B. Light independent reactions.
C. Electron transport chain
D. Calvin cycle

10. Conversion of organic matter into simple inorganic compounds is referred to as

A. Composting
B. Nitrification
C. Immobilisation
D. Mineralisation

11. Which of the following is a common characteristic of agricultural markets ?

A. Perfect competition
B. Monopoly
C. Imperfect competition
D. Oligopoly

12. Which of the following is a principle of organic farming ?

A. Use of synthetic fertilizers.
B. Maintenance of soil health.
C. Use of GMO's
D. Use of artificial pesticides

13. Which of the following factors can increase transpiration rates of a plant ?

A. High humidity
B. Low temperature
C. Wind
D. Low light intensity

14. What is the ideal temperature range for growing most mushroom species ?

A. 10 – 20°C B. 20 – 30°C C. 30 – 40°C D. 40 – 50°C

15. What is the purpose of a queen excluder in a bee hive ?

A. To keep the queen from laying eggs.
B. To keep the queen from escaping.
C. To control bee pests.
D. To separate brood from the honey.

16. A limit or restriction on the quantity of a particular good or service that can be imported or exported by a country is

A. Tariff B. Quota C. Subsidy D. Embargo

17. Which of the following sets comprises of only vector borne crop diseases?

A. Maize smut, armillaria root rot, maize streak
B. Katte disease, cassava mosaic, panama wilt
C. Head smut, Ratoon stunting disease, katte disease
D. Groundnut rosette, katte disease, sweet potato virus **A**

18. A sorghum plant with a green lamina, dry margins and leaf tips is likely to be growing in soils deficient of:

A. Potassium B. Phosphorous C. Magnesium D. Calcium

19. Slipped tendon in chicken is as a result of

A. Iron deficiency
B. Manganese deficiency
C. Cobalt deficiency
D. Iodine deficiency

20. Which type of concrete is best suitable for making foundation walls, floors of animal houses and grain stores ?

A. Strong concrete
B. Standard concrete
C. Medium concrete
D. Lean concrete

21. Which water quality parameter is critical for livestock consumption ?

A. Turbidity
B. Bacterial contamination
C. pH
D. Total dissolved solids

22. The demand for a particular item mainly because it can be used to produce something that is needed is

A. Speculative demand
B. Market demand
C. Consumer demand
D. Derived demand

23. The process by which genetic information is shuffled between homologous chromosomes during meiosis is termed as

A. Genetic recombination
B. Gene duplication
C. Chromosome mutation
D. Crossing over

24. Which of the following statements describes the life cycle of a bont tick ?

A. The larva, nymph and adult feed on the same host.
B. The larva, nymph feed on the same host and the adult feeds on a different host.
C. The larva, nymph and adult feed from different hosts.
D. The nymph and adult moult on the same host.

25. Which of the following meals fed to pigs has the highest protein percentage ?

A. Pig finishing meal
B. Weaner meal
C. Sow meal
D. Creep feed

26. The role of a strut post in a barbed wire fence is to:

A. Stretch the barbed wire in both directions.
B. Support the king post.
C. Hold barbed wire between one corner and another.
D. Prevent wires from sagging

27. Laying of dwarf eggs among layers is attributed to:

A. Malfunctioning of the isthmus.
B. Malfunctioning of the uterus.
C. Malfunctioning of the magnum
D. Ovary shedding a small yolk

28. The act of adding insulation to a farm building with an aim to reduce heat loss is

A. Cladding
B. Coating
C. Glazing
D. Weatherisation

29. The production of beef and glue from horns is an example of

A. Supplementary products
B. Complementary products
C. Joint products
D. Competitive products

30. Tapping in fruit growing is

A. the extraction of sap from the tree.
B. the artificial transfer of pollen from one fruit tree to another.
C. the removal of young buds and shoots from a fruit tree.
D. the application of plant hormones to accelerate flowering in fruit trees.

SECTION B: (70 MARKS)

31. (a) Explain how crop breeders use the composite cross method to develop an improved self-pollinated crop variety involving **eight** pureline individual crops. ***(4 marks)***

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(b) Describe how you can use the teabag method to develop a fertilizer from well decomposed animal dung. *(4 marks)*

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(c) State **four** advantages associated with organic farming. *(2 marks)*

(i) .....

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(ii) .....

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(iii) .....

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(iv) .....

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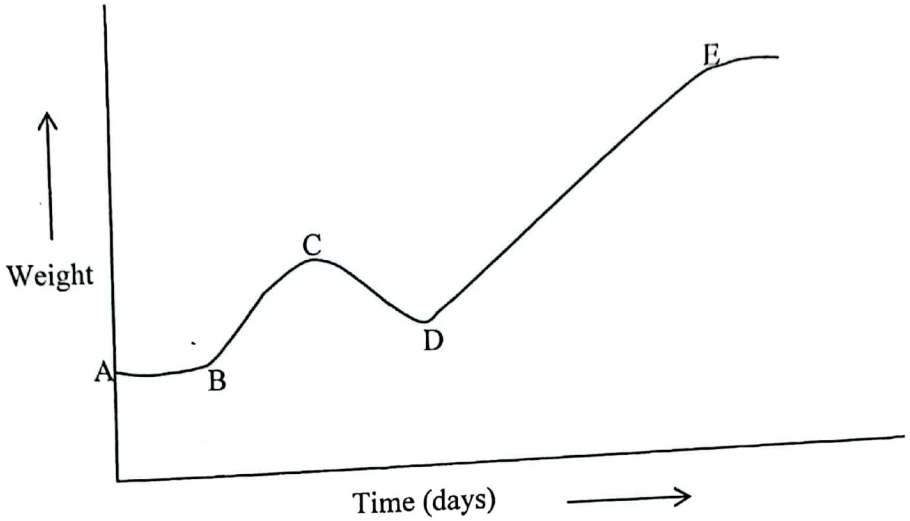
32. **The graph below shows changes in the fresh mass of the seedling during germination.**



(a) Explain the changes observed above in the mass of the seed during germination. ***(4 mks)***

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(b) State any **four** physiological events that occur between **C** and **D**.

(4 marks)

(i) .....

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(ii) .....

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(iii) .....

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(iv) .....

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(c) Explain how soil temperature influences germination in a seed. ***(2 marks)***

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33. (a) Describe how good quality cheese can be produced on a farm.

(4 marks)

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(b) State **four** precautions to take while making cheese on a farm. ***(2 marks)***

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(ii) .....

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(iii) .....

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(iv) .....

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(c) Explain any **four** abnormalities of the udder that reduce milk yield and quality on a farm. ***(4 marks)***

(i) .....

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(ii) .....

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(iii) .....

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34. (a) Define the term subsidy as used in agricultural economics. ***(2 marks)***

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(b) Give any **four** importances of subsidy schemes in agriculture. ***(4 marks)***

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(ii) .....

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(iii) .....

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(iv) .....

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(c) Mention any **four** hindrances to the implementation of the plan for modernisation of agriculture (P.M.A.) ***(4 marks)***

(i) .....

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(ii) .....

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(iii) .....

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35. (a) Describe how a farmer can calibrate a planter before a day's work. ***(4 marks)***

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(b) State **three:**

(i) Advantages of dibbling in crop production. ***(3 marks)***

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(ii) Disadvantages of dibbling in crop production. ***(3 marks)***

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36. (a) Distinguish between lopping and pollarding. *(2 marks)*

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(b) Give any **two** advantages of:

(i) Pollarding. *(2 marks)*

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(ii) Coppicing *(2 marks)*

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(c) Explain **four** factors that influence the spacing of a given crop. *(4 marks)*

(i) .....

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(ii) .....

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(iii) .....

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(iv) .....

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37. (a) Explain how the following bring about soil formation in an area.

(i) Salt crystal growth *(2 marks)*

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(ii) Abrasion *(2 marks)*

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(iii) Exfoliation *(2 marks)*

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(b) Explain **four** factors that influence soil structure formation and consistence in an area. *(4 marks)*

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