

Students Name:

School Name..... Index Number

P515/1
PRINCIPLES AND PRACTICES
OF AGRICULTURE
PAPER 1
2½ HOURS



HES MOCK EXAMINATIONS 2025

UGANDA ADVANCED CERTIFICATE OF EDUCATION

PRINCIPLES & PRACTICES OF AGRICULTURE

P515/1

2 HOURS 30 MINUTES

INSTRUCTIONS

- This paper consists of two sections A and B.
- Attempt all questions in section A and B.
- For section A put the best alternative corresponding to the best answer in the box on the right hand side of each question.
- For section B, write the answers in the spaces provided.
- No additional answer sheet shall be marked.

SECTION A (30 MARKS)

Write the letter corresponding to the best alternative answer in the box provided.

1. Which of the following does not influence cation exchange in soils?
A. relative concentration ion involved
B. the number of charges on the ion
C. the structure of the soil
D. the size of the ion
2. Which is the function of a share in a mould board plough? To
A. cut the furrow slice and pass it over to the mould board.
B. counteract the side pressure exerted by the furrow side.
C. cut the soil surface
D. connect all the other parts of the mould board.
3. The efficiency of labour on a farm may be increased by
A. giving workers specific jobs to do
B. raising the work load for each worker
C. giving workers freedom to choose the jobs to do
D. giving workers enough time to rest
4. In a bee hive, the Propolis can be used for the following except.
A. blocking holes and cracks in the hive
B. repairing combs
C. providing food for the broad
D. strengthening the thick edges of the comb.
5. Scarification of seeds is done to.
A. protect the seeds from soil borne diseases
B. improve germinability of the seeds.
C. inoculate the seeds
D. improve the storage life
6. Which of the following reactions occurs in the light stage of photosynthesis?
A. reduction of carbondioxide
B. splitting of water molecules
C. synthesis of photohoglyceric acid
D. synthesis of phosphoglyceraldehyde.
7. The following are adaptations of ticks except
A. have a wide range of hosts as their source of food
B. they are sensitive to light
C. they are rapid feeders
D. have chewing mouth parts

8. Complementary products can be described as those in which an increase in one product.
A. results in the decrease of another product
B. will not affect the output of other products
C. leads to an increase in another product
D. stops the production of another. ☐
9. In animal nutrition, the biological value of protein is the proportion of proteins.
A. digested and absorbed in the body
B. absorbed and retained in the body
C. used for growth
D. used as energy source ☐
10. Which of these epithelial tissues is associated with secretion of substances in animals?
A. columnar
B. ciliated
C. glandular
D. stratified ☐
11. A natural population of organisms which interbreed freely and produce viable offsprings is a
A. Genus
B. phylum
C. species
D. family ☐
12. Which of the following is not a correct procedure when feeding fish?
A. put food at the same spot of the pond
B. feed fish at the shallow end of the pond
C. feed fish at the same time of the day
D. place food at the bank of the pond. ☐
13. A practical illustration of stage I in a production function is
A. overstocking in a paddock
B. insufficient use of fertilizers
C. heavy feeding rates for a dairy cow
D. purchase of a 60 horse power tractor for a small area of land. ☐
14. The most profitable level of production is when the;
A. marginal product is at its maximum
B. average product is at its maximum
C. marginal product and average product are at maximum
D. marginal product is at zero ☐
15. Crop plants obtain minerals from the soil by
A. osmosis ☐

- B. transpiration pull
- C. active transport
- D. absorption

16. Which of the bases is found only in RNA

- A. Guanine
- B. Uracil
- C. Thymine
- D. Adenine

☐

17. One of the reasons why plants are pruned is to

- A. Remove the micro climate that favour pest and disease multiplication
- B. To fully utilize all space in the garden
- C. To get plant used to environmental conditions
- D. To allow easy incorporation of organic matter.

☐

18. The best time to take a sample of dip wash for testing its strength is

- A. when animals are being dipped
- B. just before animals are dipped
- C. immediately after mixing the acaricide
- D. after animals have been dipped

☐

19. Absorption banks conserve water and soil by

- A. holding soil particles together
- B. retaining water and soil
- C. increasing surface roughness to reduce speed of run-off
- D. Preventing run off

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20. Land reform refers to measures aimed at

- A. changing land ownership
- B. improving land management and use
- C. ensuring that everybody owns land
- D. controlling of land use by government

☐

21. Which of the following may be a result of inbreeding?

- A. improved fertility
- B. increased mutation rates
- C. accumulation of lethal genes
- D. absorption

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22. The advantage of using solar power on a farm

- A. maintenance free
- B. pollution free
- C. cheap to harness
- D. constant through the year

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23. When too much water is supplied to a crop during sprinkler irrigation

- A. crop maturity may be delayed
- B. soil and nutrients may be leached

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- C. pest and disease incidence is increased
- D. the soil becomes saline.

24. A sample of animal feed gave positive results with both Biuret and Benedict's solution test which of the following foods were contained in the sample?
A. fats, mineral salts and proteins
B. proteins and carbohydrates
C. mineral salts and proteins
D. fats and carbohydrates ☐
25. The main advantage of using an ultra-low sprayer is that it
A. is cheap
B. sprays a large area at a time
C. ensuring that everybody owns land
D. controlling of land use by government ☐
26. Which of these is not a suitable criterion for introducing animal drought technology?
A. land terrain
B. disease prevalence
C. soil texture
D. Acreage of land ☐
27. Which one of the following is true of a low gear in a tractor?
A. gives greater r.p.m of the engine
B. has a greater pulling power
C. consumes less fuel
D. slow and weak ☐
28. A poultry bird is noticed with dropping wings, muscle paralysis and thick mucus paralysis and thick mucus discharge from its nostrils, which one of the following diseases could the bird be suffering from?
A. fowl typhoid
B. coccidiosis
C. New castle
D. fowl pox ☐
29. The purple colouration of leaf margins in gramminae is a deficiency symptom of;
A. magnesium
B. calcium
C. phosphorus
D. potassium ☐
30. Good drainage and ploughing of soil reduces the process of.....
A. nitrification
B. denitrification
C. Decompositions
D. nitrogen fixation ☐

SECTION B

31. a) A plot of maize seedling was sprayed with concentrated liquid fertilizer later; the seedling began to wilt but recovered when it rained. After one week, a nearby pond had developed a thick covering of green algae. Later many fish in the pond died usually at night. From this information give an explanation for each of the following observations.

(i) Wilting of the seedling. (1 ½ marks)

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(ii) Recovery of seedling from wilting (1 ½ marks)

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(iii) Growth of algae in the pond. (1 ½ marks)

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(iv) Death of the fish, especially at night. (1 ½ marks)

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(b) Suggest four ways in which agricultural activities affect ecosystems. (4marks)

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32. (a) Outline the role of microbes in the rumen of a ruminant animal. (03 Marks)

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(b) How is carbohydrate digestion in ruminants different from that in non –ruminants?
(03 Marks)

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(c) Explain the factors which influence food intake by animals. (04 marks)

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33. (a) Give the meaning of the following terms

(i) Brooding.

(01 Mark)

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(ii) Incubation.

(01 Mark)

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(b) Describe the features of a good deep litter house for rearing layers? (04 Marks)

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(c) suggest ways how farmers can reduce mortality of chicks in a brooder. (04 Marks)

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34. (a) What is lease hold tenure?

(02 marks)

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(b) State **four** benefits of land consolidation as a land reform.

(04 marks)

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(c) Explain **four** causes of land conflicts in Uganda.

(04marks)

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35. (a) Define equilibrium price.

(01mark)

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(b) Explain five factors that affect the price of a commodity

(05 Marks)

[illegible]

(c) Suggest four causes of reduced supply of agricultural commodities to the market centres.

(04 Marks)

[illegible]

36. (a) Differentiate between grafting and layering as used in asexual propagation.

(02 marks)

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(b) Outline the conditions necessary for successful grafting of plants. (04 marks)

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(c) State the benefits of growing grafted oranges.

(04 Marks)

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37. (a) Explain how each of the following affects crop growth. (06 marks)

i) Soil temperature.

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ii) Soil micro-organisms.

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(c) Suggest **four** precautions taken to ensure good quality farm yard manure. (04 marks)

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END