

Name:.....Centre/IndexNo.....

School:.....Signature.....

P515/1
PRINCIPLES
AND PRACTICES
OF AGRICULTURE
PAPER 1
July/August 2023
2 ½ hours



WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Advanced Certificate of Education

PRINCIPLES AND PRACTICES OF AGRICULTURE

PAPER 1

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

- This paper consist of sections A and B
- Answer all questions in both sections.
- All answers should be written on this question paper.

FOR EXAMINER'S USE ONLY		
Question	Marks	Examiner's No./Initials
Section A		
31		
32		
33		
34		
35		
36		
37		
TOTAL		

SECTION A (30 MARKS)

Write the letter corresponding to the most correct answer in the box on the right hand side for each question.

1. The cutting of the furrow slice during ploughing is done by;
A. Share
B. Coulter
C. Mould board
D. Land side ☐
2. The nucleus in the embryo sac that fuses with the male nucleus to form a zygote in a bean plant is
A. Polar nucleus.
B. Antipodal.
C. Synergid – nucleus.
D. Egg nucleus. ☐
3. Liming in clay soil is carried out in order to
A. encourage soil aggregation.
B. discourage soil aggregation.
C. improve on soil pH
D. affect soil micro-organisms. ☐
4. Which one of the following is correct about the life cycle of a red legged tick?
A. It's larva and nymph live on the same host.
B. It's larva falls twice on the ground.
C. It's larva, nymph and adult live on different hosts.
D. It's larva, nymph and adult live on the same hosts. ☐
5. Intermittent milking as a method of drying off a lactating cow can be described as
A. milking the cow on alternate days.
B. abrupt break in the milking of a cow.
C. removing less milk than the usual then stop.
D. the animal is milked then given antibiotics. ☐
6. Which of the following factors will most influence the decision of a financial institution to lend money to a borrower?
A. Nature of the borrower's business.
B. Education level of the borrower.
C. The market interest rates.
D. Credit worthiness of the borrower. ☐
7. A lever with mechanical advantages 3, lifts a load of 60 N. What will be the effort used to lift the load by the machine.
A. 30N
B. 60N
C. 20N
D. 0.3N ☐

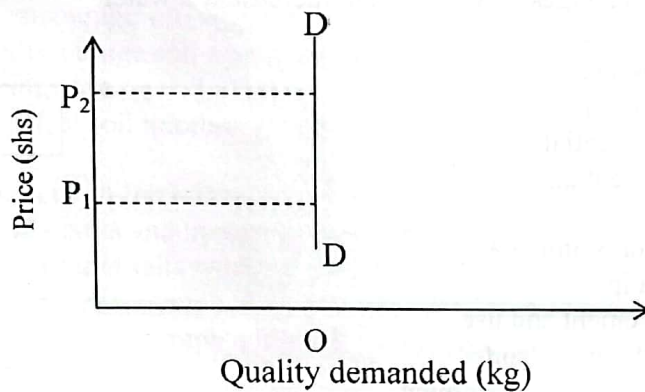
8. The ability of a construction material to remain extending in all directions when subjected to a compression force is
- A. toughness.
 - B. durability.
 - C. malleability.
 - D. hardness.
9. Which of the following processes explain how organic matter buffers soils pH?
- A. It produces oxygen and ammonia in large quantities.
 - B. It has ability to produce both hydroxyl and hydrogen ions.
 - C. It is spongy and retain enough water.
 - D. It is dark in colour so as to modify soil pH and temperature.
10. The major advantage of sexual propagation is that it
- A. causes faster growth which results in early maturity.
 - B. produces disease resistant varieties.
 - C. maintains good parental characteristics
 - D. leads to variation in plants.
11. Which one of the following changes in a cell would increase it's water potential?
- A. Decrease in turgor pressure.
 - B. Increase in solute potential.
 - C. Decrease in Osmotic potential.
 - D. Increase in pressure potential.
12. 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 the government.
13. Which of the following statements is incorrect about immunity?
- A. Antigens can be molecules of foreign microbes.
 - B. Antibodies are special protein.
 - C. Antibodies are produced against specific antigens.
 - D. Weakened or killed bacteria becomes antigens.
14. Which of the following terms refers to promotion of the rights of disadvantaged persons?
- A. Gender equality.
 - B. Gender main streaming.
 - C. Affirmative action.
 - D. Gender equity.
15. Absorption banks are best suited in areas which
- A. are flat.
 - B. are experiencing frequent erosion.
 - C. have steep slope.
 - D. have valleys.

16. In a bee colony the work bees are described as
- A. sterile females developed from unfertilized eggs.
 - B. fertile males developed from unfertilized eggs.
 - C. sterile males developed from unfertilized eggs.
 - D. fertile females developed from unfertilized eggs.
- ☐

17. Plants growing in humid habitant conditions lose excess water by
- A. Transpiration.
 - B. Guttation.
 - C. Cuticular respiration
 - D. Formation of a large number of lenticels.
- ☐

18. Determine the quantity of urea needed to supply 160 kg N/ha, if urea is 40%N.
- A. 4kg/ha.
 - B. 40kg/ha.
 - C. 64kg/ha.
 - D. 400kg/ha.
- ☐

19. Which elasticity of demand is represented by the demand curve below.



- A. In elastic demand.
 - B. Perfect elastic demand.
 - C. Perfect inelastic demand.
 - D. Unitary demand.
- ☐
20. One way in which air seasoning of wood is better than kiln seasoning is that it,
- A. requires less stacking space.
 - B. is a cheaper process.
 - C. make timber more resistant to insect attack
 - D. can decrease moisture content of timber to desired level.
- ☐
21. The rice consumption of 500 kg was reduced to 300kgs when the price rose from 5000/= to 8000/= per kg. Calculate the elasticity of demand for rice during that period.
- A. 0.006
 - B. 15
 - C. 0.66
 - D. 1.5
- ☐

22. Heterosis in farm animals can be explained by,
 A. Gene dominance
 B. Increased heterozygosity of genes.
 C. Genetic superiority of ancestors.
 D. Lethal gene effect in the herd. ☐
23. The yellowing of leaves between veins is a sign of
 A. Water logging.
 B. Nitrogen deficiency.
 C. Magnesium deficiency.
 D. Low soil pH. ☐
24. Which of the following practices would improve power out put from draught animals.
 A. Resting the animals.
 B. Using a short chain.
 C. Using a light yoke.
 D. Pairing the animal with another. ☐
25. Why is it necessary to leave some honey in the hive when harvesting?
 A. To allow bee eggs to hatch.
 B. To stimulate bees to collect more honey.
 C. To prevent bees from stinging.
 D. To prevent bees from swarming. ☐
26. Hedges are not recommended for establishing paddocks because they
 A. take long to establish.
 B. can be eaten by animals when still young.
 C. reduce the grazing area for livestock.
 D. require regular trimming and thus costly. ☐
27. An inventory is a statement which shows
 A. Assets and Liabilities.
 B. Income and Expenditure of a business.
 C. What a farmer owns and its value.
 D. Cash flow and cash out flows. ☐
28. Which one of the following conditions would cause the highest rate of Photosynthesis?
 A. 0.13% CO₂ at 20°C
 B. 0.03% CO₂ at 20°C
 C. 0.03% CO₂ at 30°C
 D. 0.02 % CO₂ at 35°C ☐
29. Grooming is a necessary practice done in dairy animals to facilitate
 A. clean milk production.
 B. easy movement of animals.
 C. easy circulation of hormones.
 D. easy mating of animals. ☐
30. It's advisable to discard unfertilized eggs during incubation because they decompose and can contaminate other eggs by producing.
 A. Methane.
 B. Carbondioxide.
 C. Hydrogen sulphide.
 D. Carbon monoxide.

Turn Over

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SECTION B (70 MARKS)

Write your answers in the spaces provided.

31. (a) Explain the meaning of gross margin (02marks)

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- (b) Give **three** ways in which the knowledge of gross margin may be utilized by the farmers. (03marks)

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- (c) A farmer has 5 hectares of land on which wheat was produced. He incurred the following costs during the production of 100,000kg of wheat. ploughing 50,000/=-, seeds 10,000/=-, weeding 70,000/=-, pesticides 20,000/=-, Harvesting 20,000/=-, transport 10,000/=-, Rent of store 20,000/=-, Insurance 15,000/=- and salary for workers 30,000/=-. He sold each Kilogram of wheat at 1000/=-
Calculate the gross margin per hectare of wheat production (05 marks)

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32. (a) Explain the factors that determine fish stocking rate in a pond. (05marks)

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- (b) Mention the management practices necessary to maintain the fish pond. (05marks)

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33. (a) Define the term Gender (02marks)

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(b) Explain how the sex ratio in the population can affect agricultural production. (02marks)

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(c) Suggest factors that influence the productivity of women in agricultural production.. (06marks)

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34. (a) Explain the factors that favour the abundance of living organisms in the soil. (04marks)

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(b) Give the desirable effects of soil living organisms. (04marks)

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35. (a) Explain the post-harvest practices of handling mushrooms. (04mark)

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(b) What challenges are faced by mushrooms growers in Uganda. (06marks)

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36. (a) Differentiate between inclined plane and a pulley as used in simple machines. (02marks)

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(b) Give **four** examples of second class levers. (02marks)

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(c) A crane lifts 600 kg through a vertical height of 12 m in 18 seconds.
(i) What weight is the crane lifting? (02 marks)

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(ii) What is the crane's useful power output? (02 marks)

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(iii) If the motor has an efficiency of 80%, what is the power in put? (02 marks)

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37. (a) Describe how the rubber ring elastrator machine is used to castrate a calf. (05marks)

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(b) Give reasons why castration is a recommended practice in animal management. (05marks)

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END