

Name: ..... Centre/Index No. ....

Signature: .....

**P515/1**

**PRINCIPLES AND  
PRACTICES OF  
AGRICULTURE**

2 ½ hrs

**STANDARD HIGH SCHOOL ZZANA**

**Uganda Advanced Certificate of Education**

**Principles and Practices of Agriculture**

**THEORY**

**Paper 1**

2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES**

*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** work on additional sheet of paper shall be marked.

<b>Section</b>	<b>Question</b>	<b>Marks</b>	<b>Initials/Signature</b>
<b>A:</b>	<b>1-30</b>		
<b>B:</b>	<b>31.</b>		
	<b>32.</b>		
	<b>33.</b>		
	<b>34.</b>		
	<b>35.</b>		
	<b>36.</b>		
	<b>37.</b>		
<b>Total</b>			

**Turn Over**

**SECTION A: (30 marks)**

1. Which one of the following soils require prompt lime application for good crop production?
- A. Saline soils.
- B. Soils with pH 7.
- C. Soils of high pH
- D. Soil with much aluminium ions.
2. Which one of the following measures can be easily used to control trypanosomiasis in cattle?
- A. Regular dipping of cattle.
- B. Vaccination of animals.
- C. Quarantine.
- D. Spraying bush lands.
3. The purpose of carrying out crop breeding at research centres is to;
- A. identify good characteristics in crops.
- B. create uniformity in crop production.
- C. improve on crop quality and quantity.
- D. obtain new crop plants.
4. Which one of the following can be a side effect of organic mulch?
- A. Encouragement of crop pests.
- B. Reduction of soil moisture content.
- C. Suffocation and death of soil micro-organisms.
- D. Provision of too much minerals for crops.
5. Which one of the following factors can contribute towards a rapid fall in soil pH?
- A. Frequent liming.
- B. Heavy mulching.
- C. Fallowing of land.
- D. Barrenness of soil.

6. Which of the following government programmes least affects agricultural development in Uganda?

- A. Unlimited industrializations.
- B. Plan for Modernization of Agriculture.
- C. Liberalization of the economy.
- D. Pluralism in government.

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7. Poor growth of terminal buds, marginal chlorosis and curling of leaves in vegetables is caused by deficiency of

- A. copper.
- B. boron.
- C. zinc.
- D. calcium.

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8. If Napier grass is consumed by an animal at the rate of 3.6% of body weight per day. Compute the amount of pasture consumed for 30 days by an animal whose body weight is 850kg.

- A. 880 kg.
- B. 918 kg.
- C. 950 kg.
- D. 1125 kg.

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9. Which one of the following is the most effective way of controlling brown streak disease in cassava?

- A. Uprooting and burning infected plants.
- B. Early planting and growing resistant varieties.
- C. Chemical spraying against brown streak disease.
- D. Close spacing to control white flies.

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**Turn Over**

10. When carrying out artificial insemination thawing of semen is intended to
- A. cool semen.
  - B. dilute semen.
  - C. preserve semen.
  - D. activate sperms.

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11. 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.

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12. Hedges are not recommended for establishing paddocks because;
- A. they take long to establish.
  - B. they can be eaten by animals when still young
  - C. hedges reduce the grazing area for livestock.
  - D. they require regular trimming and are thus costly

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13. Incomplete milking as a procedure 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.

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14. The most effective method of preparing sugarcane sets for planting against ratoon stunting and smut is by
- A. dressing them with recommended chemicals.
  - B. immersing them in hot water before planting.
  - C. fumigating them.
  - D. obtaining them from mature plants.

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15. Eggs for incubation are kept in a cool dry place so as to;
- A. avoid over heating of the embryo.
  - B. prevent premature embryo development.
  - C. increase the strength of egg shells.
  - D. prevent egg protein from being denatured.
16. Manure is added to a fish pond two weeks prior to stocking fish in order to;
- A. provide material for breeding nests.
  - B. provide food for fingerlings.
  - C. encourage growth of algae and other water plants.
  - D. give pond water a dark colour to protect fish.
17. Agricultural subsidies rendered to farmers are described as;
- A. credit facilities availed to farmers by money lenders.
  - B. loans given to farmers by co-operatives to run activities.
  - C. financial assistance extended to farmers by banks and trade unions.
  - D. government financial contribution aimed at enabling farmers to afford inputs.
18. Which one of the following pairs of ticks does NOT require three hosts to complete their life cycle?
- A. Bont tick and amblyomma species.
  - B. Brown ear tick and Bonti tick.
  - C. Ambloyomma species and Brown ear tick.
  - D. Blue tick and Red legged tick.
19. Which of the following is the most suitable mixture for producing mortar?
- A. Water, 3:4 sand : gravel.
  - B. Water, 1:4 cement : sand.
  - C. Water, 3:1:1 sand : Cement : gravel.
  - D. Water, 1:3:4 sand : cement : gravel.

**Turn Over**

20. During building construction thinners are added to paint in order to;

- A. increase speed of drying.
- B. enhance the colour characteristic of paint.
- C. regulate the flow and penetration of paint.
- D. help paint stick to the wall.

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21. Farm stores should be designed in such a way that they possess the following features. Except;

- A. a slanting floor.
- B. good ventilation.
- C. smooth interior surface.
- D. a raised floor.

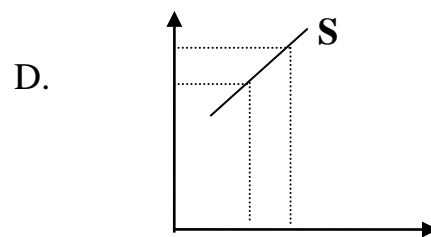
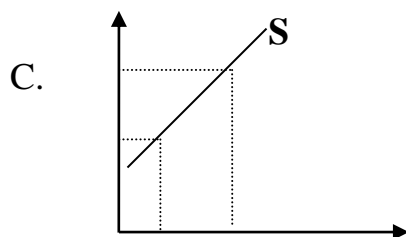
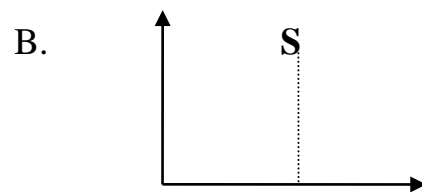
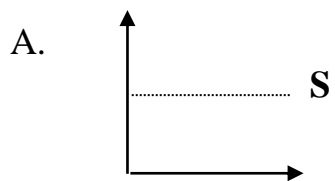
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22. Which one of the following circumstances require the use of a spray race instead of a dip tank?

- A. When there is labour shortage.
- B. Cases of heavily pregnant animals.
- C. Increased problem of parasite attack.
- D. Large herd of cattle only.

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23. The graphs below illustrate supply due to changes in price. Which one of them illustrates unitary elasticity of supply?

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24. When a super-phosphate fertilizer is applied to a clay soil, crops do not show a positive response because;
- A. Phosphate uptake by the crops is depressed by other minerals in clay soil.
  - B. Phosphates get fixed into insoluble minerals once in clay soil.
  - C. Clay soils are usually water logged and so dissolve the phosphates which are leached.
  - D. Clay soils are acidic and so, does not support development of plant roots
25. Buffer stock in marketing refers to;
- A. Products stored for export
  - B. Products stored and released slowly during shortage
  - C. Products waiting to be processed into finished goods
  - D. Goods and services rendered during emergency
26. Which one of the following discourages farmers from acquiring loans from money lending institutions?
- A. Interest is too high.
  - B. Only short term loans are offered.
  - C. Lending institutions are dishonest.
  - D. Terms of repayment are not often specified.
27. A bean plant with white flowers is dominant to the one with pink flowers. When a bean plant with white flowers was crossed with those with pink flowers all the offsprings in the F<sub>1</sub> generation had white flowers. Which one of the following would be the phenotype of the offspring if the F<sub>1</sub> generation is crossed with bean plant with pink flowers?
- A. 2 White and 2 pink.
  - B. 4 white and 0 pink.
  - C. 1 pink and 3 White.
  - D. 4 pink and 0 white.

**Turn Over**

28. The poverty alleviation programme fund in Uganda is provided for the purpose of;
- A. strengthening the rule of law.
  - B. making people become rich.
  - C. improving on education quality.
  - D. improving agricultural production.
29. In a food Chain energy flows from one consumer level to another. What is the similarity between primary consumer and secondary consumer?
- A. Both pass on the same amount of energy to the next trophic level as they received.
  - B. Both reduce in biomass due to energy loss from one level to the next.
  - C. Both pass on less energy to the next trophic level than they received.
  - D. Both are able to decompose with loss of energy.
30. Pasture for making hay is cut at the early flowering stage because at this stage the pasture is;
- A. more palatable.
  - B. more fibrous.
  - C. less bulky.
  - D. more nutrients.

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### SECTION B: (70 marks)

31. (a) Mugambe heated 809 of garden soil in a dish of 209 to 80°C to a dry mass of 759. He further heated the soil to a darkish/blackish mass which he weighed in a dish to 709.
- (i) What was the percentage of the substance being investigated in the experiment? (02 marks)

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- (ii) Give any **four** functions of the substance which was under investigation in (a) above. (04 marks)

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- (b) How can farms ensure an abundant supply of the item/substance under the experimental study in (a) above. (04 marks)

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**Turn Over**

32. (a) Differentiate the terms ‘crude protein’ and ‘crude fibre’. (02 marks)

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(b) Why is it necessary to use crude protein as a basis for formulating ruminant rations? (02 marks)

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(c) Suggest at least **two** roles played by each of the following additives in animals. (06 marks)

(i) Antibiotics

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(ii) Hormones

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(iii) Probiotics

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33. (a) Name any **four** good tree species that are used to raise artificial forests. (02 marks)

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- (b) What dangers are met with forest management in Uganda?

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- (c) What **eight** measures can be put in place to reduce forest destruction in the country? (04 marks)

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**Turn Over**

34. (a) What is the importance of fish farming in Uganda? (05 marks)

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(b) What problems are faced by fish farmers in fish rearing/farming? (05 marks)

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35. (a) Outline **six** players in agricultural policies in Uganda. (03 marks)

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- (b) State **one** objective of agriculture development strategy and how the objective may be achieved. (08 marks)

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**Turn Over**

36. (a) Describe how the following methods of wood treatment can be achieved. (06 marks)

(i) Sap displacement

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(ii) Hot and cold soaking

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- (b) What are the **four** conditions that necessitate the use of wood as a constructional material? (02 marks)

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- (c) State **four** problems associated with use of wood as a constructional material. (02 marks)

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37. (a) State **four** features that make a smoker used in honey harvesting suitable for its function. (02 marks)

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- (b) Describe the procedure of using a smoker in honey harvesting. (04 marks)

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**Turn Over**

(c) Give **four** importances of bee products in nature. (04 marks)

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**END**





