**NAME:…………………………………………………………………………………………..COMB:……………………………**

P515/1

PRINCIPLES AND PRACTICIES

OF AGRICULTURE

PAPER 1

JUNE 2016

2 ½ HOURS

DEPARTMENT OF AGRICULTURE

UGANDA ADVANCED CERTIFICATE OF EDUCATION

MOCK 1 EXAMINATIONS, JUNE 2016

PRINCIPLES AND PRATICES OF AGRICULTURE

PAPER 1

TIME: 2 HOURS 30 MINUTES

**INSTRUCTIONS**

* This paper consists of Sections A and B.
* Answer **ALL** questions in both sections.
* For Section A, write answers in boxes provided in Capital letters.
* For Section B, write the answers in spaces provided and not elsewhere.

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| --- | --- | --- |
| **FOR EXAMINER’S USE ONLY** | | |
| QUESTIONS | MARKS | INITIALS |
| SECTION A |  |  |
| SECTION B: 31 |  |  |
| 32 |  |  |
| 33 |  |  |
| 34 |  |  |
| 35 |  |  |
| 36 |  |  |
| 37 |  |  |
| TOTAL |  |  |

**SECTION A (30 MARKS)**

1. Why is it most convenient to rear fish in rectangular or square ponds? Fish………….

A. do not move in circles

B. only have a sense of those shapes.

C. can easily be caught

D. feeds best in such shapes

2. In a Bee Colony, Requeening is important to:

A. allow proper hatching of eggs

B. prevent honey from melting

C. make bees to swarm

D. to increase production of honey

3. When constructing a dairy ban on a site, a machine requires of energy to lift a load of through a vertical distance of 10 metres. The efficiency of this machine can is……………….

A. B. C. D.

4. The best material for making an ox plough share is:

A. stainless steel C. soldered steel

B. wrought iron D. chilled cast iron

5. One of the following goat breeds is best for dual purpose. Which one is it?

A. East African goat C. Anglo – Nubian goat

B. Toggeburg goat D. Saanen goat

6. At what stage of milking process is a strip cup recommended to be used?

A. When cows are resting C. Before actual milking of cows

B. After actual milking of cows D. During actual milking of cows

7. Diploid condition in cell division is expressed when:

A. somatic cell divides into two daughter cells

B. a germ cell under goes reduction division.

C. four daughter cells are formed producing gametes.

D. somatic cell has its full number of chromosomes.

8. A garden pea plant with white flowers is dominant to one with purple flowers. When a pea plant with white flowers was crossed with those of purple flowers all the offspring in the F1 generation were white flowered. Which one of the following would be the phenotype of offsprings if the F1 generation is crossed with the parents having purple flowers?

A. 2 white and 2 purple C. 1 purple and 5 white

B. 4 white and 1 purple D. 3 white and 3 purple

9. Which of the following factors encourages dentrification?

A. poor drainage C. low pH

B. low soil temperature D. adequate aeration

10. Clay and organic matter are colloidal parts of a fertile soil because they:

A. become deflocculated in alkaline soils.

B. can easily become flocculated in acidic soils.

C. have adhesion properties.

D. are small sized but with a large surface area.

11. The graph below represents two products substituting at:

Price (sh)

*Quantity ded*

1. an increasing rate C. an equal rate
2. a decreasing rate D. diminishing rate

12. Which one of the following methods is being employed by NAADS programme to ensure gender mainstreaming in agriculture production?

A. Targeting peasants to uplift them from poverty.

B. Having 1/3 of farmer representatives being women.

C. Facilitating gradual change from Subsistence to commercial production.

D. Dealing with only women at parish level.

13. When harvesting honey, it is important to leave some honey in the hive because:

A. It prevents bees from starving

B. Bees might attack all other animals on the farm.

C. It allows bee eggs to hatch well.

D. It stimulates bees to make more honey.

14. Which one of the following is a proper potting medium for coffee cuttings?

Sand

Soil

Clay

Saw dust

Clay

Saw dust

Soil

A B C D

15. Farmers should be encouraged to grow upland rice other than paddy rice because it:

A. has low labour requirement

B. is only damaged by birds before maturity.

C. does well below flood line

D. does not increase weed species in wetlands.

16. Why is it vital for an inseminator to use hand gloves when inseminating cows?

A. In order not to damage the internal parts.

B. To prevent transmission of zoonotic diseases.

C. For easy entry of the arm as gloves are slippery.

D. So as not to contaminate the reproductive system.

17. Which one of the following does not affect hatchability of fertilized eggs?

A. turning of eggs C. ventilation

B. size of the egg D. humidity

18. Land reforms refer to measures aimed at…………………………

A. changing land ownership

B. improving land management and use

C. ensuring that everybody owns land

D. government’s intentions to transfer people

19. Study graph below that shows the demand curve of eggs on the farm.

Price (sh)

Which of the following elasticity of demand is illustrated by the above product?

1. Elastic demand C. Perfectly inelastic demand
2. Unit elasticity of demand D. Perfectly elastic demand

20. Pasture plants have the highest feed value when the:

A. palatability and protein content are highest.

B. digestibility and dry matter are highest.

C. dry matter and protein content are highest.

D. protein content and digestability are highest.

21. Concrete posts are recommended for fencing in areas with high moisture content because:

A. they are cheap C. it is not liable to rotting

B. reduce sagging of wires D. do not need seasoning

22. ………………….is the part of an ox plough that stablises the plough when ploughing.

A. Landside C. Frog

B. Share D. Clevis

23. A disease condition of plants which is characterized by spores and powdery appearance on leaves is………………………

A. mildew C. damping off

B. leaf spot D. cankers

24. Which of the following hormones causes ripening in bananas?

A. Cytokinin C. Abscisic acid

B. Giberellin D. Ethylene

25. Which one of the following is a practice where trees, shrubs and crops are grown together?

A. Taungya farming C. Agrosilvi pastoral

B. Alley cropping D. Agrosilvi culture

26. How do enzymes increase the speed of a reaction? They………………..

A. increase the concentration of products.

B. change endergonic to exergonic reaction

C. lower activation energy requirements

D. add activation energy requirements.

27. The percentage of population of animals at a risk of becoming sick with a disease in an outbreak is………….

A. mobility rate C. mortality rate

B. epizootic rate D. population mortality rate

28. Marling is majorly done within the soil in order:

A. improve drainage C. improve texture

B. decrease acidity D. make it fertile

29. Njeru stock farm has an average daily temperature of 98.6oF. Evaluate its temperatures in centigrade.

A. C.

B. D.

30. Black polythene mulch improves growth of pineapples by:

A. stopping leaching of nitrogen

B. raising the temperature of the soil.

C. providing inorganic nutrients

D. controlling growth of weeds.

**SECTION B (70 MARKS)**

*Write answers in spaces provided.*

31. The graph below shows changes of carrying capacity in wild sheep on an island during 10 years following their introduction on a large piece of land in Buikwe. Study it and answer the questions below.

3.0

No. of sheep (millions)

1.8

1.0

0.5

20 30 40 50 60 70 80 90 110

Time (Weeks)

1. Describe the nature of the curve from the graph above. (02mks)

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1. (i) What do you understand by carrying capacity? (01mk)

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(ii) From the graph, estimate the carrying capacity of sheep. (01mk)

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1. Comment on the trend of sheep up to week 80 from the graph. (02mks)

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1. Identify any four (4) density dependant factors that affected the population of sheep from the study. (04mks)

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32. (a) Define the term Damping off. (02mks)

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(b) Outline any 4 environmental factors that may predispose seedlings to

dumping off. (04mks)

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(c) State any 4 signs of diseases in crops caused by viruses. (4mks)

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34. (a) Give the meaning of the following terms:

(i) Heterosis (01mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

(ii) Epistasis (01mk)

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(iii) Cloning (1mk)

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(b) The cucumber plants tend to vary their leaf shapes normally described as linear

and ovate leaved and their height, being tall and dwarf.

When linear leaved tall cucumber plants were crossed with ovate leaved dwarf cucumber plants. All the offsprings in the F1 generation were linear leaved tall plants.

Using suitable symbols, work out the phenotypic ratio of the offspring resulting from a cross between two plants of the F1 generation. (05mks)

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(c) During the experiment, when plants from F1 were crossed with each other, the following results were obtained:

- 918 linear – leaved tall plants.

- 297 ovate – leaved tall plants

- 301 linear – leaved dwarf plants

- 102 ovate leaved dwarf plants.

State one conclusion from these results. Explain your answer. (02mks)

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35. (a) State and explain the factors to consider when selecting wood for constructing

farm structures. (04mks)

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(b) Give advantages and disadvantages of using wood compared to metals. (06mks)

Advantages

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Disadvantages

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36. (a) Distinguish between soil reaction and cation exchange capacity. (02mks)

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(b) Explain the effects of applying compost manure which is not properly rotten

to soil. (04mks)

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(c) Explain the effect of low and high pH on phosphorous availability in the soil.

(04mks)

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37. (a) Explain six recommended disease preventive measures on poultry farms. (06mks)

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(b) Suggest any four practices that lead to worm infestation of poultry in deep litter

house. (04mks)

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