Name……………………………………………………… Personal No…………………………

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**P515/1**

**PRINCIPLES AND PRACTICES**

**OF AGRICULTURE**

**Paper 1**

**Jul./Aug. 2022**

**2 ½ Hours**

**SENIOR EDUCATION CONSULTANTS (SEC)**

**JOINT MOCK EXAMINATIONS, 2022**

**Uganda Advanced Certificate of Education**

PRINCIPLES AND PRACTICES OF AGRICULTURE

**Paper 1**

2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

* *This paper consists of section* ***A*** *and* ***B****. Answer* ***all*** *questions in both sections.*
* ***All*** *questions* ***must*** *be answered in the spaces provided.*
* *No additional piece of paper should be inserted in this booklet.*

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| **FOR EXAMINERS’ USE ONLY** | |
| **Section** | **Marks** |
| **Section A: 1 – 30** |  |
| **Section B: 31** |  |
| **32** |  |
| **33** |  |
| **34** |  |
| **35** |  |
| **36** |  |
| **37** |  |
| **Total** |  |

**Turn Over**

**SECTION A (30 MARKS)**

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

1. A group of tropical soils where parent material has played a key role on their formation are

A. azonal soils

B. interzonal soils

C. zonal soils

D. volcanic soils

2. Which one of the following is the effect of oestrogen hormone in cattle?

A. Enabling mating

B. Initiating signs of oestrus period.

C. Ensuring sperm production.

D. Causing ovulation.

3. A banana plant was noted with yellow leaves, purple stem tissue and reduced yield. What could be the likely disease affecting the crop.

A. Panama disease

B. Smut

C. Bacterial wilt

D. Fasarium wilt

4. In the making of concrete blocks, the acceptable ratio of cement, sand and aggregate should be;

A. 4:3:1

B. 1:2:3

C. 2:2:4

D. 2:4:6

5. Centrifugal pumps are the most suitable for irrigation because they;

A. are more durable

B. pump more water

C. are economical

D. do not need power

6. A farmer can improve farm efficiency by

A. using cheap labour

B. careful planning

C. advertising produce

D. using diesel engines

7. Of the forms of erosion, the most serious a far as removal of top moist fertile soil and reduction of soil depth is

A. gully erosion

B. rill erosion

C. sheet erosion

D. splash erosion

8. The following are scientific properties that affect stored grain except

A. oxygen supply

B. marketing

C. pests

D. store design

9. Which one of the following is mainly one host tick?

A. Blue tick

B. brown ear tick

C. red legged tick

D. bont tick

10. A good seed planter should have the following properties except

A. opens furrows at proper depth

B. meter seeds properly

C. deposit seeds properly

D. require less tractor propeller

11. The following are examples of physical weathering processes except

A. disintegration due to explication

B. reduction due to limited oxygen supply

C. expansion of ice in rocks

D. expansion of roots I crevices

12. Region 2 of the production functions ends when

A. marginal product is maximum

B. total physical product is minimum

C. marginal product is zero

D. marginal product is negative

13. A maize crop was noted with retarded root development curled leave at edge, premature leaf fall and low disease resistance. The crop was lacking

A. Nitrogen

B. Potassium

C. Phosphorus

D. Magnesium

14. The following are current liquid assets in a farm business except

A. cash at hand

B. ploughs

C. maize in store

D. bank balance

15. Clean, milk fit for consumption should have the following properties except

A. high butter fat

B. normal composition

C. good flavor

D. free from pathogens

16. On construction site, a machine requires 6520J of energy to lift a load of energy to lift a load of 50kg through a vertical distance of 10 metres. What was the efficiency of the machine after lifting the load?

A. 0.8%

B. 80%

C. 58%

D. 50%

17. The frequency of dipping on the farm is determined by

A. Number of animals

B. Availability of labour

C. Capital availability

D. Tick borne disease outbreaks

18. The following are the objectives of lining and arable land except;

A. Increases crop yields

B. Promotes decomposition of organic matter

C. Increases soil acidity

D. Prevents some crop diseases

19. The hot water treatment of sugarcane cuttingsts before planting is aimed at

A. controlling smut

B. increasing viability

C. controlling viral diseases

D. reactivating cane enzymes

20. Which one of the following happens when there is an event of failed fertilization among the female farm animal

A. Oestrogen is produced

B. Corpus latuem degenerates

C. Placenta produces progesterone

D. Follicels degenerates

21. The conversion of nitrates into proteins in the soil by microbes can be termed as

A. mineralization

B. Immobilization

C. Dentrification

D. Fixation

22. In which one of the following parts of a chloroplast are splitting enzymes mostly located?

A. Stroma

B. Intergrana

C. Cytoplasm

D. Grana

23. Mortality and fertility of boar’s sperm is reduced when;

A. Boar’s become too heavy

B. Boar’s are not used at all or are seldomly used

C. Boar’s become very thin due to poor feeding

D. Boar’s are used to often

24. Which one of the following favours the transmission of crop diseases by pathogens?

A. Low temperature

B. presence of a host plant

C. Pathogens host contact

D. Presence of soil

25. The following factors are considered before liming except

A. pH value

B. Soil type

C. Soil buffer capacity

D. Crop types grown

26. Infertility in bulls may be caused by

A. crytochidism

B. free martins

C. white heifers disease

D. delayed service

27. In spraying of farm animal, the head is sprayed last in order to

A. use less acarcide

B. increase acaricide coverage

C. control acaricide delivery

D. reduce animal nervousness

28. Killing out percentage in beef animals is influenced by

A. animal breed

B. dressing weight

C. flaying techniques

D. method of meat processing

29. The practice of growing one particular type of annual crop in pure stand and harvesting it before planting another on the same land is

A. monocropping

B. arable farming

C. mono culture

D. mixed cropping

30. Which one of the following structures plays an important role in the formation of glycoprotein in cells?

A. Golgi body

B. Lysosomes

C. Rough endoplasmic reticulum

D. Ribosomes

**SECTION B (70 MARKS)**

*Write the answers in spaces provided*

31. (a) What are the major objectives of breeding livestock? (04 marks)

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(b) Give the meaning of the following as used in animal breeding. (03 marks)

(i) Polygenic traits ………………………………………………………………………………………...

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(ii) Sex linkage

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(iii) Phenotypic variation

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32. (a) What is meant by second class lever? (02 marks)

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(b) A machine requires 6250000J of energy to lift a bag of beans weighing 50kg through vertical height of 10 meters. Calculate the;

(i) work done (03 marks)

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(ii) efficiency of the machine (03 marks)

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(iii) State two ways of improving the efficiency of a machine.

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33. (a) Differentiate between

(i) Elastic demand and inelastic demand. (02 marks)

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(ii) Joint demand and derived demand. (02 marks)

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(iii) Income elasticity of demand and price elasticity of demand. (02 marks)

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(b) Explain how prices are determined in a competitive market? (04 marks)

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34. (a) What are the conditions that favour survival of rumen microbes? (04 marks)

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(b) Outline the activities that can be adopted by the farmers to increase feed palatability in livestock. (06 marks)

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35. (a) Describe the adaptations of crop to photosynthesis. (06 marks)

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(b) What is significance of photosynthesis with in an ecosystem? (04 marks)

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36. (a) What is meant by the term fertilizing fish pond? (02 marks)

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(b) Outline the factors that can influence the amount of oxygen in the pond.

(04 marks)

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(c) Suggest activities that can be put in place to increase the amount of oxygen in the fish pond. (04 marks)

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37. (a) Give reasons why the following parts are able to grow into new plants once planted by farmers.

(i) Bulbs (02 marks)

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(ii) Rhizomes (02 marks)

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(iii) Suckers (02 marks)

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(b) Describe the conditions that are necessary for proper growth and establishment of cuttings in soils. (04 marks)

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