Name………………………………………………………………….Index No………./……

****P515/1**

**PRINCIPLES AND**

**PRACTICES OF**

**AGRICULTURE**

**Paper 1**

**DECEMBER, 2020**

21/2*hours*

**JINJA JOINT EXAMINATIONS BOARD**

***Uganda Advanced Certificate of Education***

**MOCK EXAMINATIONS – DECEMBER, 2020**

**PRINCIPLES AND PRACTICES OF AGRICULTURE**

**THEORY**

**Paper 1**

2 1/2*hours*

**INSTRUCTIONS TO CANDIDATES:**

*Answer* **ALL** *questions in this paper.*

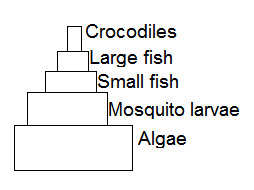
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|  |  |
| --- | --- |
| **Question** | **Mark** |
| SECT. A |  |
| Q. 31 |  |
| Q. 32 |  |
| Q. 33 |  |
| Q. 34 |  |
| Q. 35 |  |
| Q. 36 |  |
| Q. 37 |  |
| TOTAL |  |

**SECTION A (30MARKS)**

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

1. An effective method of controlling nematodes in a banana plantation is
2. Timely planting
3. Use of a trap crop
4. Mulching
5. Close spacing
6. Which one of the following pairs of food nutrients were contained in an animal feed sample that gave positive results with both biuret and Benedict’s solution?
7. Mineral salts and proteins
8. Proteins and carbohydrates
9. Fats and carbohydrates
10. Fats and proteins
11. The most important factors of production to a farmer are
12. Capital and management
13. Labour and capital
14. Land and labour
15. Management and land
16. Which one of the following parts of an animal cell is responsible for eliminating worn out organelles?
17. Lysosomes
18. Ribosomes
19. Nucleolus
20. cytoplasm
21. One limitation of tattooing as a method of animal identification is that
22. Tatoo numbers can easily come off
23. It requires skilled labour
24. Tattooing the animal reduces productivity
25. Chemical for making tatooes are expensive
26. In…………….tenure, an individual uses land for a specified period of time like 19 years
27. Individual land
28. Communal land
29. State land
30. Lease hold
31. A farmer raised a bag of maize of 200N is through a distance of 4metres by applying a force of 75N. which one of the following represents the work input?
32. 2.8J
33. 11.2J
34. 1500J
35. 800J
36. Which one of the following budgets would a farmer make when introducing dairy cattle on the farm?
37. complete budget
38. Cash flow budget
39. Supplementary budget
40. Partial budget
41. Which one of the following is an example of hybridization in crop improvement?
42. Crossing a plant with a known genotype with that of unknown genotype
43. Crossing plants with a short gestation period
44. Crossing plants of a recessive trait with those of a dominant trait.
45. Crossing high yielding crop varieties with disease resistant varieties
46. Which one of the following activities illustrates the third stage of a production function?
47. Sufficient use of fertilizers
48. Purchase of a tractor for a small piece of land
49. High feeding rates for layer birds
50. Use of few labourers on the farm
51. The major reason for adding manure to a fish pond before introducing fingerlings is to
52. Encourage growth of water plants and algae
53. Provide food to the fingerlings
54. Provide materials for breeding nests
55. Give pond water a dark colour to protect fish
56. A diploid condition in cell division is expressed when
57. A germ cell under goes reduction division
58. A somatic cell divides into two daughter cells
59. A somatic cell has its full number of chromosomes
60. Four daughter cells are produced farming gametes
61. A strip cup on a dairy farm is recommended to be used
62. Before actual milking
63. After actual milking
64. During actual milking
65. When cows are at rest in the milking parlour
66. Which of the following types of soil water is most useful to crops?
67. Field capacity water
68. Hygroscopic water
69. Gravitational water
70. Capillary water
71. Dry cow therapy as a method of drying off a lactating cow can be archived by
72. Complete stoppage of milking a cow
73. Milking a cow on alternate days
74. Milking a cow then giving it antibodies
75. Milking a cow half way then no more milking
76. The most profitable level of production is when
77. Marginal product and average product are at maximum
78. Marginal product is at maximum
79. Marginal product is zero
80. Average product is at maximum
81. Which one of the following pairs of crop pests has piercing and sucking as mode of feeding?
82. Termites and locusts
83. Maize stalk borer and American bill worms
84. Grass hoppers and rodents
85. Cotton stainer and antesia bug
86. What would be the effect of removing small fish from the ecosystem from which the pyramid of numbers in the figure below was obtained?



1. Mosquito larvae would increase
2. Large fish would increase
3. Algae would increase
4. Crocodiles would increase
5. When a bag of rice weighing 60kgs is filled vertically through a distance of 1.2m. Which one of the following represents the work done?
6. 7200J
7. 7200J
8. 72J
9. 7.2J
10. The function of over flow pipe on a roof water tank is to
11. Direct water into the tank
12. Drain out excess water from the tank
13. Collect water from the roof leading it to the delivery tube
14. Prevent large contaminants from getting into the water
15. The first physical process that occurs during seed germination involves
16. Diffusion
17. Active transport
18. Imbibition
19. Osmosis
20. Light intensity affects the rate of transpiration by
21. Providing energy necessary for transpiration
22. Affecting air movement around the leaf area
23. Influencing the opening and closing of the stomata
24. Providing energy which accelerates evaporation
25. Which one of the following soil types contains more air?
26. Clay
27. Sandy
28. Loam
29. Silt
30. Which one of the following is true about complementary products?
31. An increase in production of one leads to increase in production of the other
32. An increase in the production of one leads to decrease in production of the other
33. Production of one does not affect the other
34. They require the same quantity of inputs during production
35. Earthing up in crop production is done in order to
36. Encourage vegetative growth
37. Loosen up soil and allow free-expansion of root crops
38. Remove diseased plants to avoid spread
39. Avoid over bearing of crops
40. Lactation period in a cow is initiated by secretion of
41. Oxytocin hormone
42. Progesterone hormone
43. Prolactin hormone
44. Oestrogen hormone
45. Drifting in bees can be caused by the following **except**
46. Using hives with narrow entry
47. Placing hives facing the same direction
48. Painting hives with the same colour
49. Strong blowing wind
50. The function of the frog on an ox-plough is to
51. Penetrate the soil and cut furrow slices
52. Provide attachment for mould board, share and land side
53. Adjust the depth and width of ploughing
54. Turn furrow slices and burry trash.
55. What is the effect of rapid elongation of the hypocotyl during seed germination?
56. Cotyledon remains underground
57. Plumule grows straight out of the ground
58. Cotyledon is carried above the ground
59. Hypocotyl straightens
60. The association between nitrogen fixing bacteria in the root nodules can best be classified a
61. Commensalism
62. Mutualism
63. Parasitism
64. Competition

**SECTION B (70MARKS)**

Answer **all** questions in this section.

Write all your answers in the space provided

1. (a) Give **five** reasons why herbivores are not able to utilize all the carbon present in plants

(5marks)

1. ………………………………………………………………………………………………………………………………………………………………………………
2. ………………………………………………………………………………………………………………………………………………………………………………
3. ………………………………………………………………………………………………………………………………………………………………………………
4. ………………………………………………………………………………………………………………………………………………………………………………
5. ………………………………………………………………………………………………………………………………………………………………………………

(b) Suggest **five** ways of ensuring that feeds are efficiently utilized by animals on the farm

(5marks)

1. ………………………………………………………………………………………………………………………………………………………………………………
2. ………………………………………………………………………………………………………………………………………………………………………………
3. ………………………………………………………………………………………………………………………………………………………………………………
4. ………………………………………………………………………………………………………………………………………………………………………………
5. ………………………………………………………………………………………………………………………………………………………………………………
6. (a) Give **five** uses of phosphorous in plant nutrition (5marks)
7. …………………………………………………………………………………………………………………………………………………………………………………..
8. …………………………………………………………………………………………………………………………………………………………………………………..
9. …………………………………………………………………………………………………………………………………………………………………………………..
10. …………………………………………………………………………………………………………………………………………………………………………………..
11. ……………………………………………………………………………………………………………………………………………………………………………………

(b) How would you identify phosphorous deficiency in growing crops? (5marks)

1. …………………………………………………………………………………………………………………………………………………………………………………….
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..
5. …………………………………………………………………………………………………………………………………………………………………………………..
6. (a) Briefly explain the following demand conditions (3mks)
7. **Inelastic demand**

……………………………………………………………………………………………………………………………………………………………………………………..

1. **Elastic demand**

…………………………………………………………………………………………………………………………………………………………………………………….

1. **Elasticity of Demand**

…………………………………………………………………………………………………………………………………………………………………………………....

(b) Give **three** situations when the demand of a commodity may be inelastic. (3mks)

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

(c) If the price of soya bean in the market falls from shs 500 to shillings 400per kilogram and the quantity which is bought increase from 100kgs to 130kgs. Calculate the elasticity of demand for soya bean (4marks)

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

1. (a) What is **land reform?** (2marks)

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

(b) State **four** objectives of land reform. (4marks)

1. …………………………………………………………………………………………………………………………………………………………………………………..
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..

(c) Give **four** problems associated with communal land tenure. (4marks)

1. …………………………………………………………………………………………………………………………………………………………………………………..
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..
5. (a) What are the qualities of a good animal feed trough? (5marks)

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

………………………………………………………………………………………………

………………………………………………………………………………………………

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

(b) State **five** objectives of housing farm animal. (5marks)

1. …………………………………………………………………………………………………………………………………………………………………………………..
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..
5. ……………………………………………………………………………………………………………………………………………………………………………………..
6. (a) Give **four** reasons why farmers are encouraged to take up fish farming. (4marks)
7. …………………………………………………………………………………………………………………………………………………………………………………..
8. …………………………………………………………………………………………………………………………………………………………………………………..
9. …………………………………………………………………………………………………………………………………………………………………………………..
10. …………………………………………………………………………………………………………………………………………………………………………………..

(b) Explain **four** factors that affect the abundance of fish in a fish pond. (6marks)

1. …………………………………………………………………………………………………………………………………………………………………………………..
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..
5. (a) State **four** functions of roots in plants. (4marks)
6. …………………………………………………………………………………………………………………………………………………………………………………..
7. …………………………………………………………………………………………………………………………………………………………………………………..
8. …………………………………………………………………………………………………………………………………………………………………………………..
9. …………………………………………………………………………………………………………………………………………………………………………………..

(b) Explain **four** factors which influence water absorption by plant roots. (6marks)

1. …………………………………………………………………………………………………………………………………………………………………………………..
2. …………………………………………………………………………………………………………………………………………………………………………………..
3. …………………………………………………………………………………………………………………………………………………………………………………..
4. …………………………………………………………………………………………………………………………………………………………………………………..

END-