**Name : ……………………………………………………………………. Sign …………………**

**P515/1**

**PRINCIPLES AND PRACTICES OF AGRICULTURE**

**Paper 1**

**July/August 2019**

**2 ½ HOURS**

**INTERNAL MOCK EXAMINATIONS 2019**

**UGANDA ADVANCED CERTIFICATE OF EDUCATION**

**PRINCIPLES AND PRACTICES OF AGRICULTURE**

***Instructions to candidates***

* This paper consists of sections A and B
* Attempt **all** questions in this paper
* For section A, write answers for the best alternatives in the box provided in capital letters.
* For section B write answers in the spaces provided.
* No additional sheet(s) of paper should be attached.

|  |  |  |
| --- | --- | --- |
| **For examiners use only** | | |
| **SECTION** | **Mark** | **Initials of examiner** |
| A |  |  |
| SECTION B |  |  |
| No. 31 |  |  |
| No. 32 |  |  |
| No. 33 |  |  |
| No. 34 |  |  |
| No. 35 |  |  |
| No. 36 |  |  |
| No. 37 |  |  |
| **Total** |  |  |

**SECTION A (30MARKS)**

1. The of a closed season is not an effective method of controlling American boll worm in cotton because the boll worm ;
2. Undergoes dormancy and can survive during the closed season
3. Is well adapted to survive in adverse conditions
4. Has a large number of alternative hosts
5. Produce many eggs which enable it to survive
6. Brass is used in moving parts of machines because it….
7. Does not wear easily
8. Is a good conductor of heat
9. Is a good conductor of electricity
10. Is resistant to corrosion
11. Land reform refers to measures aimed at …….
12. Changing land ownership
13. Improving land management and use
14. Ensuring that everybody owns land
15. Controlling of land use by government
16. The figure below illustrates the phenomenon of limiting factors. In this case, what is the limiting factor for photosynthesis?

High light intensity

Rate of photosynthesis

Low light intensity

Temperature

Fig 1.

1. Rate of photosynthesis
2. Temperature
3. Light intensity
4. Carbon dioxide
5. Which one of the following would be the result of crossing over in plant breeding?
6. Increased variability among species
7. Weakening if the dominant genes
8. Elimination of some recessive genes
9. Increased number if gene mutations among off springs
10. A hive product made by bees from resinous substances picked from plants is referred to as …..
11. Royal jelly
12. Wax
13. Nector
14. Propolis
15. The following activities are done before restocking an old fish pond except……..
16. Building a crib at the inlet corner of the pond
17. Measuring and marking the pond area
18. Identifying and repairing of leakages
19. Removing mud from the pond.
20. Gender refers to…..
21. The biological state of being a male of female
22. Visible differences between genital organs
23. The way someone feels about being a male of female
24. The different social roles of men and women as observed and held by a given group of people
25. One condition that may lead to anemia in piglets is…..
26. Lack of iron in the sow’s feed
27. Low level of iron in the sows feed
28. Feeding the sow on pasture plant only
29. Feeding the sow on concentrates only
30. Which of the following process occur when rocks disintegrate by hydrolysis?
31. Hydroxyl ions in rocks are replace by metallic cations.
32. Metallic cations in rocks are replaced by hydroxyl ions
33. Metallic cations in rocks are replaced by hydrogen ions
34. Hydrogen ions in rocks are replaced by metallic cations
35. The fungus that cause browning in cotton lint is transmitted by ………………………………..
36. Taybergus sp
37. Dysdercus spp
38. Empoasca sp
39. Cryptophlebia sp
40. The change in allele frequencies in a population as a result of random events is referred to as ….
41. Genetic drift
42. Mutation
43. Deletion
44. Chromosome mutation
45. Which of the following are utilizable byproducts resulting from microbial fermentation in the rumen?
46. Glucose
47. Alcohol
48. Carbon dioxide
49. Acetic acid
50. Which of the following is secondary tillage implements?
51. Disc plough
52. Disc harrows
53. Ox-plough
54. Mould board plough
55. The following are functions of marketing boards except:
56. Apportioning dividends
57. Offering credit
58. Bulking storage
59. Causes faster growth
60. The main advantage of using an ultra low volume sprayer is that it…………..
61. Is cheap
62. Sprays a large area at a time
63. Is easy to maintain
64. Is safe to use
65. The following are causes of post harvest losses in mushrooms production except;
66. Microbial spoilage
67. Bruise-induced discolouration bruise-induced discolouration
68. Lack of dryers
69. Continued maturation and senescence of the mushroom
70. Which of the following stages in cell division is reresented in figures.

***Fig*** *2*

1. Telophase I
2. Prophase II
3. Anaphase II
4. Metaphase I
5. The following factors influence power output from animals except;……
6. Yoke used for hitching
7. Animal handling by the operator
8. Sex of the animal
9. Weather conditions

1. Which of the following diseases is controlled from spreading by burning the carcus?
2. Food and mouth diseases
3. Anthorax
4. Brucesllosis
5. Heart water disease
6. When the price of meat was 1,500/= per kilo, a family consumed 20kg per month. When the price rose to 2,500/= the family consumed 10kg per month. What is the elasticity of demand for the meat?
7. 1.33
8. 0.4
9. 0.67
10. 0.75
11. Which of the following correctly describes the green house effect?
12. Increasing atmospheric carbon dioxide prevents heat loss from the earth’s surface.
13. Depletion of the ozone layer increases the atmospheric temperature
14. The earth gives out carbon dioxide which prevents light rays from the sun reaching the earth surface.
15. The action f the CFCs on ozone layer produces heat that increases atmospheric temperature.
16. Which of the following sets of vitamins is not necessarily included in the formation of feeds for ruminants?
17. A, B, and E
18. C, B and K
19. K, E and D
20. A, E and D
21. The funds loaned out to farmers under the poverty alleviation programme in Uganda can be classified as;
22. Short term credit
23. Long term credit
24. Medium credit
25. Agriculture credit
26. Paddy rice is able to grow in water logged soil conditions because the plants have
27. Lenticels
28. Parenchyma tissue
29. Breathing roots
30. A dense mass of root hairs
31. Intramuscular injection in cattle is best administered in the ………………………………..
32. Hump
33. Neck
34. Rump
35. Shoulder
36. Good drainage and ploughing of soil reduces the process of …..
37. Nitrification
38. Decomposition
39. Denitrification
40. Nitrogen fixation
41. A cow which lacked milk in its udder at the calving of its calf was diagnosed to have a brain damage , which one of the following parts of the brain is most likely to have been affected?
42. Pineal body
43. Cerebrum
44. Posterior lobe of the pituitary gland
45. Anterior lobe of the pituitary gland
46. Which one of the following is not a necessary condition for the proper functioning of a planter?
47. The seed bed should be fine
48. The planter should be serviced

1. Regulates soil temperature
2. Neautralises acidity of the soil
3. Moderate moisture levels in the soil is important because it;
4. Dissolves organic matter
5. Source of water to living organisms
6. Regulates soil temperatures
7. Neutralizes acidity if the soil

**SECTION B (70MARKS)**

31.a) Explain three damages caused by nematodes on crops. (4 ½ mks)

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

b) State three ways of controlling nematodes in crop plants (3mks)

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

c) Describe how root nodule are formed on the roots of leguminous plants (2½mks)

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32.a) (i) Define the term efficiency standards as used in agriculture production (2mks)

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(ii) Explain two types of efficiency standards used in agriculture production (2mks)

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b) Table 1 shows the profits per hectare and costs of production of a farmer for the year 2018

**Table 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Crop product** | **Beans** | **Maize** | **Cotton** | **Simsim** | **Total** |
| Profit /ha (Ugx) | 70,000 | 90,000 | 120,000 | 80,000 | 360,000 |
| Capital used/ha | 45,000 | 50,000 | 72,000 | 33,000 | 200,000 |

Using the information in the table above. Calculate the farmers’ overall efficiency.

(4mks)

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c) Outline four objectives of using efficiency standards on the farm (2mks)

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33.a) Differentiate between a simple machine and a compound machines. (2mks)

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

b) Outline three uses of simple machines on a modern farm. (3mks)

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

c) (i) Define the term force (2mks)

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

(ii) Give three ways of applying force on an object. (3mks)

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

34.a) Define the following terms (3mks)

(i) Continuous variation

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

(ii) Discontinuous variation

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

(iii) Genetic equilibrium

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

b) Give four sources of variability in both plants and animals (4mks)

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

c) State three ways of reducing genetic variation in a population (3mks)

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35.a) Explain five factors that affect fish stocking rate in a pond (5mks)

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

b) How would you improve on the productivity of a fish pond (5mks)

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36.a) What is gender analysis? (2mks)

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b) State four reasons for gender analysis? (4mks)

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

c) Give four reasons why women have less access to agricultural credit than men (4mks)

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

37.a) Explain four factors that influence the germination efficiency of crops seeds. (4mks)

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

b) Describe how you would carry out a viability test for a seed lot using tetrazolium salt solution

(4mks)

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

c) Outline two importances of seed dormancy in crop production (2mks)

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