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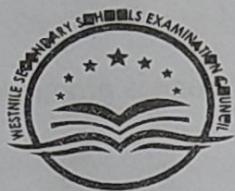
P515/1

**PRINCIPLES AND PRACTICES  
OF AGRICULTURE**

**PAPER 1**

**JULY/AUG 2024**

**2 ½ Hours**



**WENSSEC**

**Regional Mock Examination**

**Uganda Advanced Certificate of Education**

**PRINCIPLES AND PRACTICES OF AGRICULTURE**

**PAPER 1**

**2 HOURS 30 MINS**

**INSTRUCTIONS TO CANDIDATES:**

*This paper consists of sections A and B*

*Answer all questions in both sections*

*All answers should be written on this question paper*

**FOR EXTERNAL USE ONLY**

QUESTION	MARKS	EXAMINERS NO / INITIALS
SECTI ON A		
31		
32		
33		
34		
35		
36		
<b>TOTAL</b>		

(WENSSEC)

### SECTION A (30 MARKS)

1. The following are results of an experiment to determine percentage of water within a sample of soil.
- Mass of crucible = 15g  
Mass of crucible + soil = 30g  
Mass of crucible + soil after drying = 25g  
The percentage of water in this soil is
- A. 18.7%  
B. 33.3%  
C. 20.0%  
D. 66.7%
- 
2. Which one of the following hormone is produced by corpus luteum?
- A. Progesterone  
B. Oestrogen  
C. Follicle stimulating hormone  
D. Luteinizing hormone
- 
3. A lever was to lift a load of 60N by applying an effort of 20n. What was the mechanical advantage of the lever?
- A. 3  
B. 40  
C. 80  
D. 1200
- 
4. The ability of a construction material to remain extended in all directions when subjected to a compression force is its?
- A. Durability  
B. Toughness  
C. Malleability  
D. Hardness
- 
5. Which one of the following is true about metaphase 1 of mitosis during cell division?
- A. Chromosomes shorten and thicken hence become more visible  
B. Homologous chromosomes separate at each pole and migrate to opposite side  
C. Spindle fibres are fully formed and attached to the centromeres.  
D. The number of chromosomes at each pole is half the number in the mother cell.
-

6. Which one of the following pests damages the flower buds, berries and the growing points of a coffee plant?

- A. Mearly bugs
- B. Antestia bugs
- C. Coffee berry borer
- D. Skeletoniser

7. The major reason for adding sand to clay soil for crop production is to

- A. Improve drainage
- B. Decrease acidity
- C. Improve water retention capacity
- D. Decrease alkalinity

8. Which one of the following is the reason for blowing smoke into the hive during harvesting?

- A. Dry honey so as to increase its viscosity
- B. Add a layer on the honey socs to improve its quality
- C. Make bees start eating honey thus heavy and inactive
- D. Remove the wings of bees so as to produce high quality honey.

9. Poor tuber development in Irish potato is due to deficiency

- A. Potassium
- B. Magnesium
- C. Nitrogen
- D. Phosphorus

10. Which of the following would be effect on ploughing if the landside in the ox-plough is worn out?

- A. Low speed ploughing
- B. Poor turning of the furrow slices
- C. Poor penetration of the plough into the soil during ploughing
- D. Poor stability of the plough during ploughing.

11. The reaction below represents one of the following processes. Identify which one it is.



- A. Decomposition
- B. Photosynthesis
- C. Anaerobic respiration
- D. Aerobic respiration

12. Which of the following terms refers to promotion of the rights of disadvantaged persons?

- A. Gender equality
- B. Gender mainstreaming
- C. Affirmative action
- D. Gender equity

13. Worker bees are:

- A. Sterile females developed from fertilized eggs
- B. Fertile males developed from unfertilized eggs
- C. Sterile males developed from unfertilized eggs
- D. Fertile females developed from unfertilized eggs.

14. In the preparation of silage molasses is added in order to:-

- A. Increase temperature
- B. Kill harmful organisms
- C. Act as a catalyst
- D. Aid bacterial action.

15. Milk consumption of 500 litres reduced to 300 litres when the price rose from 5,000/= to 8,000/= per liter. Calculate the elasticity of demand for milk during that time.

- A. 0.06
- B. 15
- C. 0.6
- D. 1.5

16. An animal feed is described as basal if it has a high;

- A. Protein content
- B. Fibre content
- C. Fat content
- D. Energy content

17. Which of the following explains why small seeds are planted near the soil surface.

- A. Because they need a lot of sunshine
- B. To avoid early exhaustion of the food reserves
- C. To facilitate early photosynthesis
- D. To make full use of nutrients near the surface.

18. In soil testing, barium sulphate is added to:

- A. Neutralize the soil
- B. Break soil particles and settle it
- C. Indicate the pH of the soil
- D. Reduce acidity.

19. Which one of the following statements is true of complementary products?
- A. An increase in production of one leads to an increase in the production of the other
  - B. They have equal demand in the market.
  - C. They use the same quantities of inputs
  - D. An increase in the production of one leads to a decrease in the production of the other.
20. During upward movement of water in the xylem vessels, the water molecules do not easily pull apart because of high:
- A. Cohesive force
  - B. Viscosity
  - C. Surface tension
  - D. Adhesive forces.
21. Which one of the following explains why cotyledons remain under the ground during hypogeal germination?
- A. Rapid elongation of hypocotyls
  - B. Rapid elongation of epicotyls
  - C. Cotyledons rapidly increase in size during germination
  - D. Cotyledons are stuck to the plumule.
22. Which one of the following activities can be done in a fish pond to ensure continuous supply of oxygen?
- A. Removing water weeds from the ponds
  - B. Making the pond floor to be smooth
  - C. Regular refilling of the pond with fresh water
  - D. Planting grass on the pond walls.
23. Ms. Doreen had a nursery bed of coffee seedlings. She transferred the good seedlings into another nursery bed to reduce congestion. This activity is called:
- A. Transplanting
  - B. Pricking out
  - C. Thinning
  - D. Hardening off
24. The major objectives of plan for modernization of agriculture (PMA) is
- A. Empower all farmers
  - B. Increase household income and quality of life
  - C. Promote farmer groups
  - D. Create avenues for financing and delivering of advisory services

25. Milk with a specific gravity higher than 1.032 mmHg is likely to be

- A. Adulterated with water
- B. From a sick animal
- C. Adulterated with solids
- D. From an exotic animal.

26. Which one of the following does not influence bulk density of soil?

- A. Organic matter
- B. Soil texture
- C. Soil temperature
- D. Soil depth

27. Absorption banks conserve water and soil by

- A. Holding soil particles together
- B. Retaining water and soil
- C. Increasing surface roughness to reduce speed of run off
- D. Preventing run off.

28. The function of droppers in fencing is to:

- A. Support the strainers
- B. Prevent the wire from fagging
- C. Prop up the struts
- D. Support the standard.

29. Which one of the following is an implicit cost?

- A. Tax on farmers' income
- B. Insurance for farm assets
- C. Supervision by the farmer
- D. Cost of inputs

30. Which one of the following is an example of a two-host tick in cattle?

- A. Blue tick
- B. Red legged tick
- C. Brown ear tick
- D. Bond tick

**SECTION B (70 MARKS)**

31. (a) At construction site, a block of weight 50 kg was raised using an effort of 20N. Calculate the:-

(i) Mechanical advantage (2 marks)

(ii) If the machine used has a velocity ratio of 4, calculate its efficiency (2 marks)

- (b) The construction material of a weight 400N is lifted to height of 5 meters in 5 seconds

**Calculate the:-**

(i) Power used

(ii) Work done

(2 marks)

(iii) Outline the effects of livestock rearing to the environment especially in  
an urban setting. (5 marks)

a. ....

b. ....

c. ....

d. ....

e. ....

(c) What strategies can be taken to reduce the effects mentioned above? (5 marks)

a. ....

b. ....

c. ....

d. ....

e. ....

32. (a) What is meant by seasoning in timber processing? (2 marks)

.....  
.....  
.....

(b) Explain the following methods of seasoning timber (2 marks)  
(i) Solar seasoning

.....  
.....  
.....

(ii) Air seasoning (2 marks)

.....  
.....  
.....

(iii) Kiln seasoning (2 marks)

.....  
.....  
.....

(c) State four qualities of a good wood preservatives. (4 marks)

i. ....

ii. ....

iii. ....

iv. ....

33. (a) Define Agro forestry (2 marks)

.....  
.....  
.....

- (b) Describe three types of agro forestry practices commonly carried out by farmers (3 marks)
- i. ....
- ii. ....
- iii. ....
- ....

- (c) Give six characteristics of Agro forestry trees. (6 marks)
- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....
- vi. ....
- ....

34. (a) State four advantages of using a top bar hive over other bee hives (4 marks)
- i. ....
- ii. ....
- iii. ....
- iv. ....
- ....

(b) State three uses of royal jelly as a bee product (3 marks)

- i. ....
- ii. ....
- iii. ....

(c) Give four possible causes of swarming of bees (4 marks)

- i. ....
- ii. ....
- iii. ....
- iv. ....

35. (a) Outline six ways in which urban and peri-urban farming is beneficial (6 marks)

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....
- vi. ....

(b) Give six challenges of urban and peri-urban farming (6 marks)

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....
- vi. ....

(c) Outline five characteristics of urban farming (5 marks)

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....

**END**