



**MOUNTAIN VIEW ZONAL EXAMINATIONS BOARD**

2021 PRIMARY SCHOOL LEAVING CERTIFICATE MOCK EXAMINATIONS

**PRIMARY SCIENCES**

**(100 Marks)**

**Subject Number: P163**

**Friday, 18<sup>th</sup> June**

**Time Allowed: 2 hours**

**08:00 – 10:00 am**

**Name of Candidate:** \_\_\_\_\_

(Surname First)

**Name of School:** \_\_\_\_\_

**Instructions**

1. **This paper contains 10 printed pages. Please check.**
2. This paper has **two** Sections; **A** and **B**. Section **A** consists of **40 multiple choice questions** carrying **1 mark** each. **Encircle** a letter of your choice representing the right answer to each question. Section **B** has **12 structured questions**. Write your answers to this section on the question in the spaces provided. The **maximum number of marks** for each answer is indicated against the question.
3. Answer **all** questions.
4. In the table provided on this page, **tick** against the **question number** you have answered.

**5. IMPORTANT**

- Please make sure you have written your Name, the **Name of your School** and **your Examination Number** on the question paper in the spaces provided.
- Hand in your **worked question** paper to the invigilator when time is called to stop writing.

Question Number	Tick Questions 41-52 if answered	Do not write in these columns	
1 – 20			
21 – 40			
41			
42			
43			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

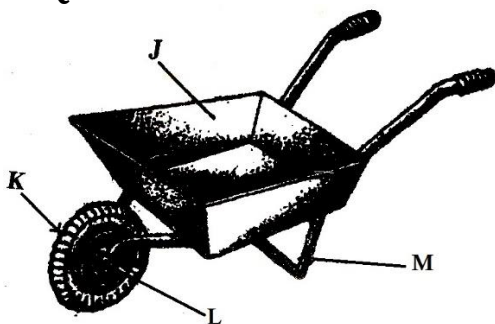
## Section A (40 Marks)

Encircle the letter (A, B, C or D) that representing the **correct** answer.

## AGRICULTURE

1. To which sub branch of agriculture does the keeping of bees belong?
  - A. rabbitry
  - B. apiculture
  - C. aquaculture
  - D. poultry
2. Why should a farmer add manure to a fish pond?
  - A. to improve growth of planktons
  - B. to kill predators
  - C. to reduce temperature of water
  - D. to feed the fish
3. Which of the following is **not** a physical farm record?
  - A. field operations records
  - B. labour records
  - C. crop records
  - D. sales records
4. Which of the following is a deficiency sign of potassium in crops?
  - A. stunted growth
  - B. poor root development
  - C. purple leaves
  - D. poor quality fruits
5. What is the name of the farm implement?
  - A. maize shell
  - B. wheel barrow
  - C. farm cut
  - D. shovel
6. Which of the following parts would require greasing during maintenance?
  - A. J
  - B. K
  - C. L
  - D. M
7. Why is it important to have box ridges in a garden?
  - A. they hold water
  - B. they control pests
  - C. they increase soil fertility
  - D. they control weeds
8. Which of the following can help a farmer when dry spell destroys crops?
  - A. harvesting crops
  - B. irrigating crops
  - C. ensuring the crops
  - D. growing more than one crop
9. Which of the following is the best way of controlling witch weed?
  - A. uprooting
  - B. early planting
  - C. early weeding
  - D. crop rotation
10. Which of the following is the best way of propagating pineapple?
  - A. seed
  - B. suckers
  - C. cuttings
  - D. budding

**Figure 1** is a diagram of a farm implement. Use it to answer **Questions 5** and **6**.



**Figure 1**

11. It is important to add green vegetables in order to provide \_\_\_\_\_.
- A. vitamins
  - B. proteins
  - C. fats
  - D. carbohydrates
12. A system of agroforestry in which trees that are used as feed for livestock alternate with arable crops is referred to as:
- A. life fence
  - B. improved furrow
  - C. folder banks
  - D. alley cropping
13. Which of the following ways can control East Coast Fever in cattle?
- A. dipping
  - B. quarantine
  - C. burying affected cattle
  - D. restricting movement

**Figure 2** is a diagram of a one of the flower pests. Use it to answer **Questions 13 and 14**.



**Figure 2**

14. What is the name of the pest?
- A. mealy bug
  - B. spider mite
  - C. white fly
  - D. slug
15. How does the pest cause damage to the flowers?
- A. cuts stems
  - B. suck juice
  - C. eats flowers
  - D. eats roots

**Table 1** shows a financial record of poultry production. Use it to answer **Questions 17 and 18**.

**Table 1**

INCOME			EXPENDITURE		
Date	Details	Amount (MK)	Date	Details	Amount (MK)
01/01/20	Sold 100 eggs @ K60 each	6 000.00	04/01/20	Bought 2 drinkers @ K1 500 each	3 000.00
02/01/20	Sold 10 chickens @K3 200 each	32 000.00	05/01/20	Bought 10 bags of feed @ K220 000.00	220 000.00

16. What were the total sales?
- A. K 9 000.00
  - B. K 38 000.00
  - C. K220 000.00
  - D. K223 000.00
17. The farmer's loss was
- A. K 9 000.00.
  - B. K 26 000.00.
  - C. K185 000.00.
  - D. K252 000.00.
18. The principle of substitution of inputs solves the problem of
- A. how to produce.
  - B. what to produce.
  - C. where to produce.
  - D. when to produce.

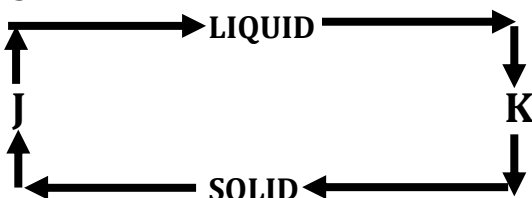
19. Which of the following parts of the sprayer delivers the spray?
- sieve
  - plastic container
  - lens
  - nozzle cup

20. Which of the following types of soil is suitable for vegetables?
- loam soil
  - sandy soil
  - sandy loam soil
  - clay soil

## SCIENCE AND TECHNOLOGY

21. What do insects need from flowers?
- nectar
  - scent
  - colour
  - honey

**Figure 3** is a diagram showing the changes of the states of matter. Use it to answer **Questions 22** and **23**.



**Figure 3**

22. What process is represented by the letter J?
- melting
  - condensation
  - freezing
  - evaporation
23. How would the change of state marked K be useful to people?
- drying clothes
  - beer brewing
  - preservation of food
  - rain formation

24. Which of the following organs regulates the amount of food transported by blood in the body?
- heart
  - kidney
  - lung
  - liver
25. Animals with jointed legs are known as:
- molluscs
  - annelids
  - nematodes
  - arthropods
26. Which of the following is an indirect source of light?
- star
  - moon
  - fire
  - bulb
27. Which of the following seeds is dispersed by water?
- bean seeds
  - cotton seeds
  - black jack
  - coconut seeds

**Figure 4** is a diagram showing a food chain. Study and use it to answer **Question 28**.

**Green grass → grasshopper → birds → snakes**

28. What would happen if there were no green grass in the food chain?
- the grasshoppers would die.
  - birds and snakes would grow healthy.
  - the population of grasshoppers would increase.
  - birds would multiply
29. Which of the following preservation technologies removes water from foods?
- canning
  - salting
  - boiling
  - freezing
30. Which of the following is **not** the effect of poor nutrition on the nation?
- decreased risk of illnesses
  - high mortality rate among children
  - loss of standards
  - strain on the country's economy
31. Which of the following is the fluid released by gall bladder?
- pancreatic juice
  - bile
  - juice
  - urine

**Figure 5** is a diagram showing a type of worms. Use it to answer **Questions 32 and 33**.



**Figure 5**

32. What is the name of the worm?
- round worm
  - tape worm
  - pin worm
  - hook worm

33. Which of the following is **not** a symptom of the infection caused by the worm?
- pain in the stomach
  - patient looks pale
  - diarrhoea
  - swollen belly
34. The process whereby green plants make their own food because of light is called:
- photosynthesis
  - hypothesis
  - photosynthesis
  - pollination

**Figure 6** is a diagram showing a person pulling a box on to the back of a lorry using a machine. Use it to answer **Questions 35 and 37**.



**Figure 6**

35. What is the name of the machine?
- lever
  - pulley
  - wedge
  - inclined plane
36. Which letter represents the effort?
- P
  - Q
  - R
  - S
37. If the force marked **S** is **4N** and **R** is **2N**, find the mechanical advantage.
- 0.5
  - 2.0
  - 6.0
  - 8.0

38. Which of the following is the function of platelets?  
 A. clotting blood  
 B. dissolving food  
 C. transporting oxygen  
 D. fighting germs

39. Lack of vitamin C in the diet can cause:  
 A. beriberi  
 B. scurvy  
 C. diarrhoea  
 D. night blindness

40. Which of the following technologies can help to conserve the environment?  
 A. solar panels  
 B. mortar and pestle  
 C. bow and arrow  
 D. canoe

**Section B (60 Marks)**

**AGRICULTURE**

41. a. Name any **three** processes in the water cycle.

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**(3 Marks)**

- b. Explain the importance of ground water to crops

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**(2 Marks)**

42. **Figure 7** is a diagram showing one of the types of irrigation. Use it to answer the questions that follow.



**Figure 7**

- a. Identify the type of irrigation.

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**(1 mark)**

- b. Mention **two** types of crops that use the irrigation.

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**(2 Marks)**

- c. Name **two** sources of water for irrigation.

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- \_\_\_\_\_ (2 Marks)
43. a. Name any **two** factors to consider when designing an agroforestry plot.
- \_\_\_\_\_
- \_\_\_\_\_ (2 Marks)
- b. Give a reason why:
- (i) thinning of seedlings is important in agroforestry plot.
- \_\_\_\_\_ (1 Mark)
- (ii) trees with a large canopy should be widely spaced in agroforestry plot.
- \_\_\_\_\_ (1 Mark)
- c. Give any **one** example of flowers that can be used as medicine.
- \_\_\_\_\_ (1 Mark)
44. A learner wanted to find out if soil contains air. He gathered the following materials for conducting the experiment:  
**clear plastic bottle, jug and soil sample**
- a. Name **one** material the learner forget to include on the list of materials
- \_\_\_\_\_ (1 Mark)
- b. Why did a learner use a clear plastic bottle?
- \_\_\_\_\_
- \_\_\_\_\_ (2 Marks)
- c. What would be the evidence to show that soil contains air?
- \_\_\_\_\_
- \_\_\_\_\_ (2 Marks)
- 45.a. Define the term 'agricultural environment'.
- \_\_\_\_\_
- \_\_\_\_\_ (1 Mark)
- b. State any **two** major elements of agricultural environment.
- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_ (2 Marks)
- c. Explain **one** harmful effect of elements of agricultural environment.
- \_\_\_\_\_
- \_\_\_\_\_ (2 Marks)
46. List any **two** cash crops grown in Malawi.
- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_ (2 Marks)

b. Give any **two** ways in which agriculture is important to the nation.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(2 Marks)

c. State any **one** risk in farm business.

\_\_\_\_\_ (1 Mark)

## SCIENCE AND TECHNOLOGY

47. a. Define solution.

\_\_\_\_\_  
\_\_\_\_\_ (1 Mark)

b. Give any **two** examples of solutes.

\_\_\_\_\_  
\_\_\_\_\_ (2 Marks)

c. Mention any **two** ways of separating a mixture.

\_\_\_\_\_  
\_\_\_\_\_ (2 Marks)

48. a. List any **three** steps that are followed when designing technologies.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (3 Marks)

b. Give any **two** ways in which reporting any scientific investigation is important.

\_\_\_\_\_  
\_\_\_\_\_ (2 Marks)

49. a. Draw an electric circuit with two cells, a switch and two bulbs in series.



(4 Marks)

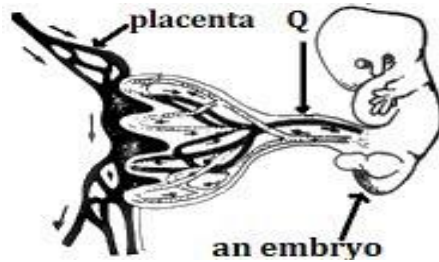
b. Mention **one** characteristic of reptiles.

\_\_\_\_\_ (1 Mark)

Continued/...



50. **Figure 8** is a diagram showing a developing embryo attached to its mother through the placenta. Use it to answer the questions that follow.



**Figure 8**

a. Identify the part labelled **Q**.

\_\_\_\_\_ (1 Mark)

b. Explain the function of the part labelled **Q** identified above.

\_\_\_\_\_ (1 Mark)

c. Explain **two** functions of iron to the pregnant woman.

\_\_\_\_\_  
 \_\_\_\_\_ (2 Marks)

d. Define classification.

\_\_\_\_\_  
 \_\_\_\_\_ (1 Mark)

51. a. Why is it important to plan a meal? (Give **two** reasons).

\_\_\_\_\_  
 \_\_\_\_\_ (2 Marks)

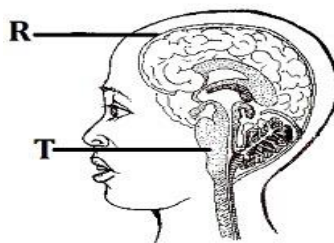
b. What are **two** factors to consider when planning meals?

\_\_\_\_\_  
 \_\_\_\_\_ (2 Marks)

c. Define 'bleach' in laundry.

\_\_\_\_\_ (1 Mark)

52. **Figure 9** is a diagram of the human brain. Use it to answer the questions that follow.



**Figure 9**

a. Identify the part labelled **T**.

\_\_\_\_\_ (1 Mark)  
 Continued/...

b. Explain **two** functions of the part labelled **R**.

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(2 Marks)

c. Mention any **two** examples of class one lever.

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(2 Marks)

**END OF QUESTION PAPER**

**NB: This paper contains 10 printed pages.**