



EXAMINATION NO.: _____
THE MALAWI NATIONAL EXAMINATIONS BOARD

2022 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 15 July

Time Allowed: 2 hours

8:00 – 10:00 am

Name of Candidate: _____
(Surname First)

Name of School: _____

Instructions

1. This paper contains 12 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. Section **B** consists of 12 structured questions and 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. Please make sure you have written your **examination number, name and school name** on the question paper in the spaces provided.
6. Hand in your 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			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

Encircle a letter of your choice representing the right answer to each question.

AGRICULTURE

1. Which of the following ways can help farmers to increase yield per unit area?
- A. use of local varieties
 - B. use of improved varieties
 - C. selling products at the right time
 - D. selling graded products

2. Which of the following problems can be solved using the principle of substitution?
- A. how to produce
 - B. what to produce
 - C. where to produce
 - D. when to produce

A lot of farmers in Chipeta village are making losses in their farm business because their fruits and vegetables become rotten before reaching the market. Use this information to answer questions 3 and 4.

3. Identify the problem of agricultural marketing the farmers are facing.
- A. bulkiness of farm produce
 - B. seasonality of production
 - C. high transport costs
 - D. perishability of produce
4. Which of the following ways can **best** solve the problem?
- A. processing the farm produce
 - B. selling at the nearest market
 - C. using special transport facilities
 - D. storing produce in time of plenty

After collecting eggs from the school farm, learners were asked to put them in trays. Use this information to answer questions 5 and 6.

5. What marketing function was done by the learners?
- A. processing
 - B. grading
 - C. packaging
 - D. storage
6. Which of the following is the advantage of the marketing function demonstrated by the learners?
- A. makes pricing of produce easy
 - B. preserves the quality of produce
 - C. attracts customers to buy the product
 - D. increase the usefulness of the product
7. Which of the following ways of conserving water helps in improving soil fertility?
- A. dams
 - B. removing silt
 - C. box ridge
 - D. mulching
8. How can termites be controlled in a woodlot?
- A. fencing the surrounding
 - B. scaring them away
 - C. inter planting with garlic
 - D. planting hard trees

9. Which of the following fruits is harvested by felling the stem?
- pine apples
 - strawberries
 - bananas
 - paw-paws

Mr Phiri has bought a Fresian breed from Zimbabwe into his kraal which had Malawian Zebu to improve his cattle. Use this information to answer questions 10 and 11.

10. Identify the method of cattle improvement used by Mr Phiri.
- introduction
 - selection
 - cross breeding
 - out breeding
11. Which of the following is the expected improvements on his cattle after sometime?
- more meat production
 - high milk production
 - high resistance to disease
 - adaptable to local conditions
12. Which of the following activities in marketing functions involves sorting and weighing of crops?
- packaging
 - selling
 - transporting
 - sorting
13. Which raw material can be obtained from farm animals?
- hides
 - sugarcane
 - tobacco
 - cotton

Figure 1 shows one of the weeds in maize garden. Use it to answer questions 14 and 15.

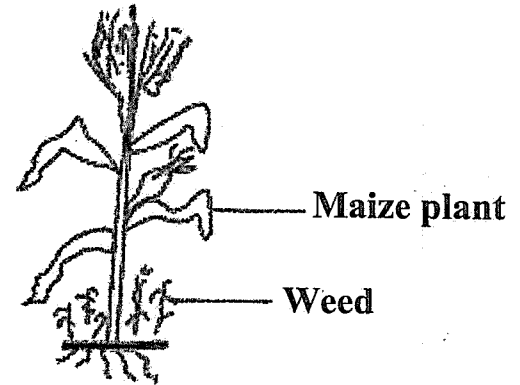


Figure 1

14. Identify the weed.
- black jack
 - star grass
 - witch weed
 - commeline
15. Which of the following practices can best control the weed in **Figure 1**?
- early planting
 - crop rotation
 - inter cropping
 - cross planting
16. Which of the following statements is a characteristic of a good animal house?
- it should be well drained and easy to clean.
 - it should be hot in winter and summer
 - it should have a smeared floor
 - it should be cold in winter and summer.

17. To which sub-branch of animal production does the keeping of bees belong?
- A. poultry
 - B. apiculture
 - C. aquaculture
 - D. rabbitry
18. Which of the following is a sign of east coast fever in cattle?
- A. swollen lymph nodes
 - B. excessive salivation
 - C. change in body temperature
 - D. sores on feet and in the mouth

Figure 2 is a diagram showing one of the types of vegetables. Use it to answer questions 19 and 20.

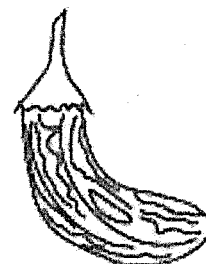


Figure 2

19. Identify the vegetable.
- A. carrot
 - B. egg plant
 - C. okra
 - D. green beans
20. To which group of vegetables does the one in Figure 2 belong?
- A. fruit
 - B. legume
 - C. leaf
 - D. root

SCIENCE AND TECHNOLOGY

21. Blood in veins is dark red in colour because it has _____.
- A. less oxygen
 - B. more oxygen
 - C. more nutrients
 - D. less nutrients
22. Which of the following foods can be preserved by both salting and drying methods?
- A. beans
 - B. fish
 - C. maize
 - D. milk
23. Which of the following is the reason for airing during laundering of garments?
- A. to remove dirt
 - B. to remove wrinkles
 - C. to protect clothes from insects
 - D. to ensure complete dryness
24. Which of the following is a fabric made from artificial fibres?
- A. linen
 - B. cotton
 - C. nylon
 - D. woolen

During an experiment on conditions necessary for seed germination, Tapiwa put bean seeds in two transparent containers and covered them with soaked cotton. Container A was put in a refrigerator while container B was not. Use this information to answer questions 25 and 26.

25. What condition for seed germination was being investigated?
- A. air
 - B. soil
 - C. warmth
 - D. moisture
26. What would be the results of the experiment after five days?
- A. seeds in container A only will germinate
 - B. seeds in all the containers will germinate
 - C. seeds in all the containers not will germinate
 - D. seeds in container B only will germinate.
27. Which of the following worms can be prevented by washing fruits before eating?
- A. hook
 - B. tape
 - C. round
 - D. earth
28. Which of the following foods can be cooked using baking method?
- A. fruits
 - B. pudding
 - C. beans
 - D. meat

29. Which of the following foods provides the body with water?
- A. groundnuts
 - B. potatoes
 - C. margarine
 - D. fruits
30. Which of the following is a disadvantage of improvising classroom technologies?
- A. usually durable
 - B. may be precise
 - C. may not be precise
 - D. encourages creativity.
31. Which of the following characteristics is for insect pollinated flowers?
- A. dull petals.
 - B. have no scent.
 - C. have no nectar.
 - D. produce nectar.
32. The problem in which a patient has difficulties in emptying bowels and uses increased effort to remove hard faeces is called _____.
- A. constipation
 - B. intestinal ulcers
 - C. intestinal parasites
 - D. haemorrhoids
33. Which of the following is the effect of poor nutrition on an individual?
- A. low national development
 - B. low community productivity
 - C. strain on national economy
 - D. poor mental capacity

34. Two systems that are used in transmitting messages through telephone are
- A. analogue and digital
 - B. analogue and mouse
 - C. digital and mouse
 - D. mouse and cursor.
35. The cooking of food in a liquid for a long time is called _____.
- A. frying
 - B. stewing
 - C. baking
 - D. roasting
36. Which of the following foodstuffs are rich in carbohydrates?
- A. animal fats and sun flower seeds.
 - B. cheese and avocado pears
 - C. macadamia nuts and root vegetables.
 - D. millet and yams
37. Which of the following laundry materials is used to stiffen garments?
- A. breaches
 - B. soaps
 - C. starches
 - D. stains
38. Which of the following is the function of roots in plants?
- A. connects leaves and branches
 - B. holds the plant
 - C. allows air into the plant
 - D. produce fruits and seeds.
39. Which of the following is a danger of premarital sex?
- A. marriage failure
 - B. fear of parents
 - C. unplanned pregnancies
 - D. blood pressure
40. Which of the following is an occasional way of caring for a kitchen?
- A. opening windows
 - B. cleaning windows
 - C. drying the floor
 - D. mopping the floor

Section B (60 marks)

Write your answers to this section on the question paper in the spaces provided.

AGRICULTURE

41. a. Give **two** reasons why soil should contain humas in crop production.

(2 marks)

- b. Give **two** ways in which permaculture helps in improving soil fertility.

(2 marks)

Continued/...

42. a. At one farm, goats were showing the following signs and symptoms; high fever and swelling of the stomach.

(i) Identify the disease which affected the goats.

(1 mark)

(ii) List down any **two** ways of controlling the disease.

(2 marks)

- b. State any **two** ways of improving cattle.

(2 marks)

- c. Give **two** reasons why goats should be fed on a balanced feed.

(2 marks)

43. a. Mention any **two** ways of keeping water safe.

(2 marks)

- b. **Figure 3** shows an irrigation method of growing crops by farmers in Malawi.

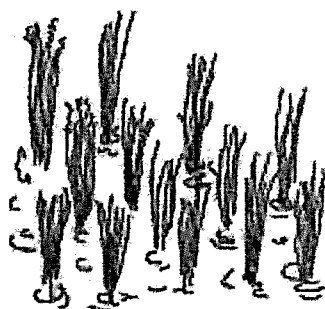


Figure 3

(i) What type of irrigation is shown in **Figure 3**?

(1 mark)

(ii) Give **two** advantages of this type of irrigation.

(2 marks)

Continued/...

44. a. The **table** below shows one of the records kept by farmers in a village.

DATE	NUMBER OF HENS LAYING	EGGS		FEED	
		NUMBER	COST	NUMBER	COST
01-09-20	100	60	1050	13	676
02-09-20	100	72	1095	13	676
03-09-20	100	67	1005	13	676

- (i) What type of farm record is shown in the **table**?

_____ (1 mark)

- (ii) On which date did the farmer make the biggest profit?

_____ (1 mark)

- b. Give **two** uses of a windmill as a farm implement.

_____ (2 marks)

- c. Give **one** reason why the control tap of a sprayer should be kept tightened when not in use.

_____ (1 mark)

45. **Figure 4** is a crop grown in Malawi.



Figure 4

- a. Identify the crop.

_____ (1 mark)

Continued/...

45. (Continued)

- b. Give any **two** uses of the crop.

- c. Name **two** districts in Malawi where the crop is grown.

(2 marks)

46. Explain each of the following methods of controlling diseases in cattle.

(2 marks)

- a. disinfection

- b. vaccination

(2 marks)

(2 marks)

SCIENCE AND TECHNOLOGY

47. a. State **two** processes that happen in the body as blood is circulating.

(2 marks)

- b. (i) Define 'classification'.

(1 mark)

Continued/...

47. b. (Continued)

(ii) Give **two** ways in which animals are classified.

(2 marks)

c. Classify the following food items; fish, mangoes, cassava, amaranthus and irish potatoes into the three groups; protective, energy giving and body building.

protective: _____

energy giving _____

body building: _____

(5 marks)

48. a. State the recommended method for separating each of the following mixtures.

(i) beans and sand

(ii) tea leaves from tea

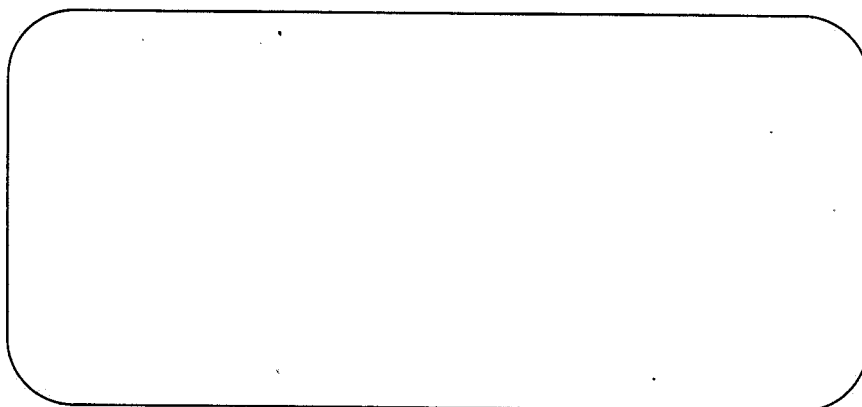
(iii) iron particles from sand

(3 marks)

Continued/...

48. (Continued)

- b. Draw a series circuit with two bulbs, a switch and a cell.



(3 marks)

49. a. Give **one** reason for including moringa in the diet of a person living with HIV and AIDS.

(1 mark)

- b. State **one** negative effect of information and communication technologies.

(1 mark)

50. Figure 5 is a diagram showing changes of states of matter.

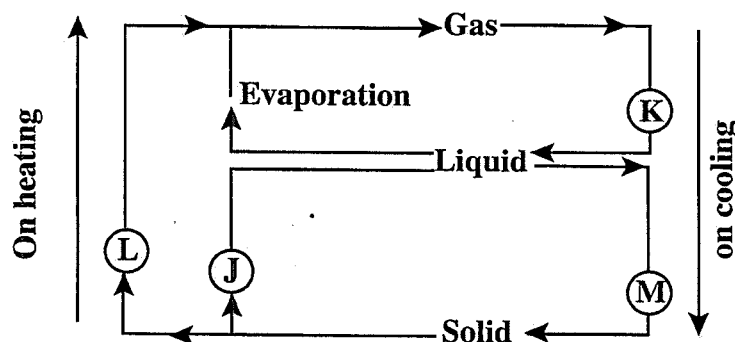


Figure 5

Name processes labelled J, K, L and M.

J: _____

K: _____

L: _____

M: _____

(4 marks)

Continued/...

51. a. Define 'malnutrition.'

(1 mark)

- b. Give **two** reasons why food preservation is important.

(2 marks)

52. a. Figure 6 is a diagram showing the human nervous system.

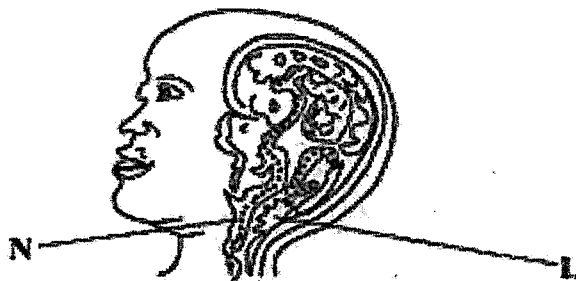


Figure 6

- (i) Name the part labelled L.

(1 mark)

- (ii) State the function of the part labelled N.

(1 mark)

- b. (i) State **two** ways of caring for nervous system.

(2 marks)

- (ii) Explain the effect on a human being if the brain is damaged.

(1 mark)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2021 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 10 September

Time Allowed: 2 hrs

8:00 – 10:00 am

Name of Candidate: _____

(Surname First)

Name of School: _____

Instructions

1. This paper contains 12 printed pages. Please check.
2. This paper has two sections A and B. Section A consists of 40 multiple questions carrying 1 mark each. **Encircle** a letter of your choice representing the right answer to each question. Write your answers to this section on the question paper 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** and **examination number** on the question paper in the spaces provided.
 - Hand in your 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			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. Which of the following is produced from a farm animal?
 - A. farm cart
 - B. ridger
 - C. shoes
 - D. plough
2. Which of the following is a solution to the problem of perishability of produce in agricultural marketing?
 - A. using special transport facilities
 - B. storing produce in cold rooms
 - C. reducing the amount of production
 - D. packaging produce in suitable containers
3. Which of the following is a way of improving quality of water?
 - A. cutting down trees
 - B. construction of dams
 - C. adding chlorine
 - D. putting wastes in rivers
4. Identify the colour of flemish giant breed of hare from the following
 - A. grey
 - B. red
 - C. white
 - D. black
5. Which of the following tree species is used as fodder for animals?
 - A. mthethe
 - B. msangu
 - C. leaucaena
 - D. acasia
6. Which of the following practices leads to water pollution?
 - A. applying organic matter
 - B. using vegetative cover
 - C. using contour ridges
 - D. disposing human wastes on land surface
7. Which of the following is a farm business activity?
 - A. record keeping
 - B. sales keeping
 - C. receipt keeping
 - D. farm keeping
8. Why should a rabbit house be raised above the ground?
 - A. it reduces infestation of maggots and worms.
 - B. it reduces overcrowding of rabbits.
 - C. it reduces competition when feeding.
 - D. it reduces movement of the rabbits.
9. Which of the following is the advantage of a deep litter chicken house?
 - A. chicken can find food for themselves
 - B. many chickens can be kept in a small area
 - C. chicken can be fed on locally made food
 - D. it is difficult to control breeding
10. Which of the following ways can improve soil fertility in the garden?
 - A. making ridges
 - B. making box ridges
 - C. making contour ridges
 - D. making compost manure
11. Identify the practice that cause soil erosion from the following.
 - A. cultivation on the steep slope
 - B. shifting cultivation
 - C. making ridges across the slope
 - D. planting trees on bare land

Continued/...

Mr Phiri bought a Fresian breed from Zimbabwe into his kraal which had Malawian Zebu to improve his cattle. Use this information to answer **question 12**.

12. Which of the following characteristics will the new breed have?
- short legs
 - grow fast
 - small udder
 - large belly
13. Which of the following is a soil organism?
- earthworm
 - liver fluke
 - plasmodium
 - anthracnose
14. Which of the following components of soil is made up of decaying animal parts?
- soil air
 - soil water
 - organic matter
 - inorganic matter

Figure 1 is a diagram showing a farming activity. Use it to answer **questions 15 and 16**.

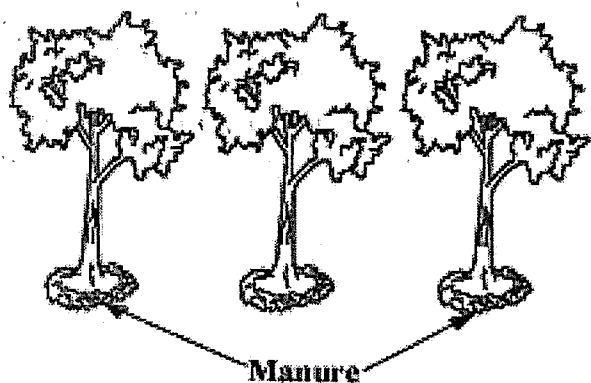


Figure 1

15. Identify the farming activity.
- growing field crops
 - growing vegetables
 - growing trees
 - growing flowers
16. To which sub branch of Agriculture does the activity belong?
- floriculture
 - olericulture
 - agronomy
 - silviculture
17. Which of the following is a disease that attacks rabbits?
- anthrax
 - sores hocks
 - pneumonia
 - tuberculosis
18. How can a farmer control ticks in cattle?
- by rotational grazing
 - by de-worming
 - by dusting with chemicals
 - by avoid contamination of food with dung
19. Which of the following breeds of goats is kept for meat?
- Angola
 - Somali
 - Soanen
 - Toggenburg
20. Which of the following crop enterprises can best make sure of flood irrigation?
- banana farming
 - maize farming
 - agroforestry farming
 - rice farming

SCIENCE AND TECHNOLOGY

21. Which of the following technologies is an example of indigenous technology?

- A. torch
- B. wheel barrow
- C. catapult
- D. cell phone

22. Which of the following technologies is **not** used for communication?

- A. radio
- B. printer
- C. fax
- D. television

23. The energy which an object acquires if it is raised above the ground is called

- A. kinetic
- B. chemical
- C. potential
- D. electrical

24. Which one of the following is an example of animal stains?

- A. perspiration
- B. cocoa
- C. rust
- D. wax

25. State **one** function of a leaf to the plant.

- A. hold the branches
- B. takes water and minerals from the soil
- C. stores food for the plant
- D. makes food for the plant

26. Which of the following foods provide protein to the body?

- A. oranges
- B. fish
- C. irish potatoes
- D. sugarcane

27. Which of the following changes of state of matter can be used for making ice blocks?

- A. evaporation
- B. freezing
- C. melting
- D. condensation

28. Which of the following is the force which the earth exerts on the ground?

- A. elastic
- B. functional
- C. magnetic
- D. gravitational

Figure 2 is a diagram showing reflection of light. Use it to answer **questions 29 and 30.**

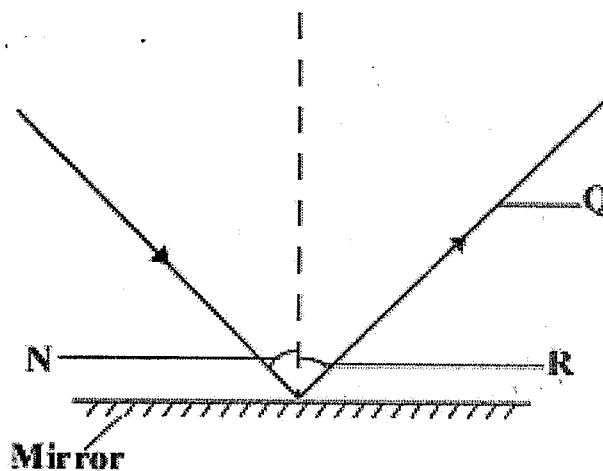


Figure 2

29. Name the ray marked **Q**.

- A. incident ray
- B. reflected ray
- C. refracted ray
- D. emergent ray

30. What is the size of the angle marked **R** if angle **N** is 45° ?

- A. 55°
- B. 90°
- C. 45°
- D. 60°

31. Which of the following fruits can be dispersed by water?
- coconut oil
 - guava
 - dandelion
 - crotalaria
32. Which of the following invertebrates is an arthropod?
- snail
 - amoeba
 - roundworm
 - millipede

Study Figure 3 and use it to answer questions 33 and 34.

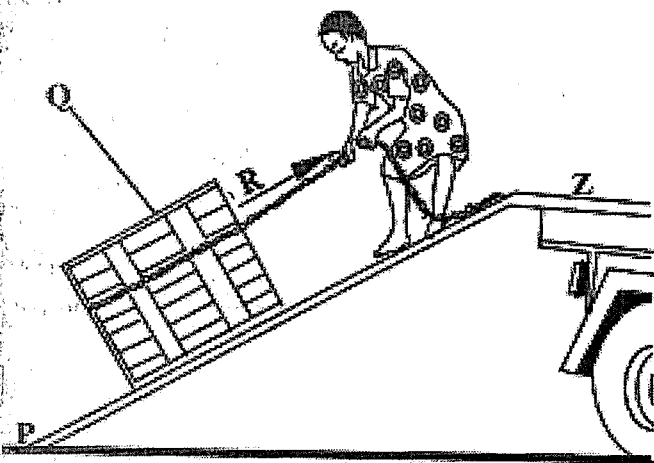


Figure 3

33. Name the machine
- lever
 - pulley
 - see-saw
 - inclined plane
34. Where is the effort applied for the machine to work?
- R
 - Z
 - P
 - Q
35. Which of the following insects undergo complete metamorphosis?
- grasshopper
 - bugs
 - housefly
 - cockroach
36. Which of the following parts of the body stores excess food?
- stomach
 - liver
 - kidney
 - intestines
37. Identify the sense organ which controls body temperature from the following?
- tongue
 - eye
 - skin
 - nose
38. Which of the following activities is conducted in the implementation stage of a scientific investigation?
- interpreting analysed data.
 - identifying variables.
 - drawing a conclusion.
 - identifying the problem.
39. Choose a non flowering plant from the following?
- beans
 - mangoes
 - rice
 - moss
40. Which of the following market functions involves telling people about a product?
- selling
 - advertising
 - market research
 - buying



Section B (60 marks)

AGRICULTURE

41. a. Define 'rabbity?'

(1 mark)

b. Give **two** problems associated with agricultural marketing.

(2 marks)

42. a. State any **two** systems of agroforestry practiced in Malawi.

(2 marks)

b. Give **two** reasons why agroforestry is important to farmers.

(2 marks)

43. a. Give a reason why farmers will be encouraged to produce commodities when they are scarce?

(1 mark)

b. Mention any **two** examples of physical farm records.

(2 marks)

c. Explain how the slope of land can affect agricultural production.

(1 mark)
Continued/..

44. a. (i) State any **two** factors to consider when choosing a site for a vegetable garden.

(2 marks)

- (ii) Give **two** reasons why mulching is important.

(2 marks)

- b. Write down any **two** crop husbandry practices.

(2 marks)

Figure 4 is a diagram of a farm implement. Use it to answer question 45 a and b.

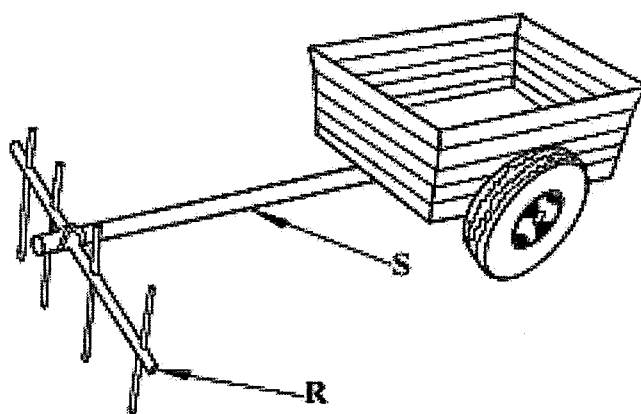


Figure 4

45. a. (i) Name the part labelled R.

(1 mark)

Continued/...

45. a. (Continued)

(ii) What is the use of part labelled S?

(1 mark)

b. State any **two** safety measures when using the farm implement.

(2 mark)

46. a. Classify the following feed of cattle into roughages and concentrates:
cotton seed cakes, green grass, maize bran, meat meal and millet stalks.

roughages: _____

concentrates: _____

(5 mark)

b. State any **two** advantages of Malawi Zebu.

(2 mark)

c. Explain **two** reasons why placing beddings on the floor in a cattle house is important.

(2 mark)

Continued

SCIENCE AND TECHNOLOGY

Figure 5 is a diagram showing a longitudinal section of the heart. Use it to answer **question 47 a and b.**

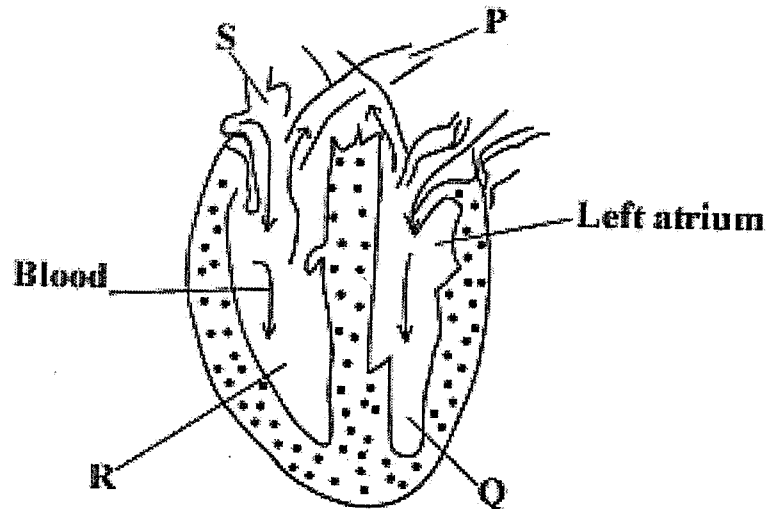


Figure 5

47. a. Which letter represents:

(i) pulmonary artery _____

(ii) left ventricle _____

(2 marks)

b. Give any **two** reasons why blood in vessel labelled S is dark red in colour.

(2 marks)

c. Give **one** function of each of the following blood cells in the body.

(i) red

(ii) white

(1 mark)

Continued/...

48. a. Describe each of the following nutritional deficiency diseases:

(i) scurvy

(1 mark)

(ii) goitre

(1 mark)

b. Name any **one** suitable food that helps to prevent scurvy.

(1 mark)

c. State the difference between lacto vegetarians and strict vegetarians.

(2 marks)

49. a. Give any **one** way why it is important to improve indigenous technology.

(1 mark)

b. Mention any **two** examples of mineral stains.

(2 marks)

c. State any **two** effects of destroying the environment.

(2 marks)

Figure 6 is a diagram showing a method of cooking. Use it to answer questions 51 a, b and c.

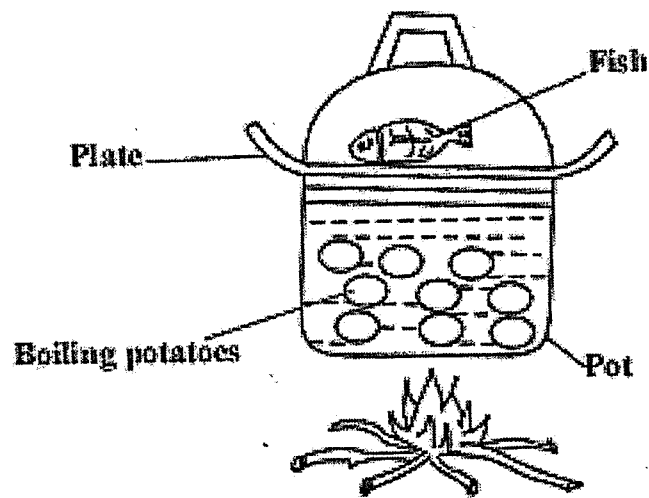


Figure 6

50. a. (i) Identify this method of cooking the fish.

_____ (1 mark)

- (ii) Give **one** reason why this method of cooking is economical.

_____ (1 mark)

- b. Write down **three** effects of poor nutrition on the family.

(3 marks)

Figure 7 is a circuit. Study and use it to answer questions 51 a, b and c.

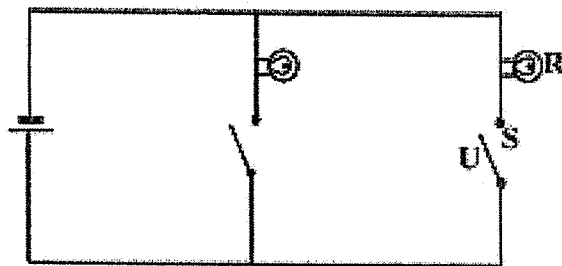


Figure 7

Continued/..

51. a. Identify the type of circuit.

(1 mark)

- b. What will happen to component **R** if port **U** touches point **S**?

(1 mark)

- c. Give **two** advantages of the circuit.

(2 marks)

52. a. Give **two** reasons for reporting the findings of a scientific investigation.

(2 marks)

- b. Name

- (i) the female reproductive organ which produces egg cells.

(1 mark)

- (ii) the part of brain which controls balance.

(1 mark)

- c. State the function of gall bladder in the digestive system.

(1 mark)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____
THE MALAWI NATIONAL EXAMINATIONS BOARD
2020 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 22 May

Time Allowed: 2 hours
8:00 – 10:00 am

Name of Candidate: _____
(Surname First)

Name of School: _____


Instructions

- 1. This paper contains 12 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 paper 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 and examination number on the question paper in the spaces provided.**
 - Hand in your 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			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. To which branch of agriculture does "night queen" belong?
 - A. agronomy
 - B. pomoculture
 - C. floriculture
 - D. olericulture
 2. Which of the following ways can solve the problem of perishability of farm produce?
 - A. drying
 - B. grading
 - C. sorting
 - D. selling
 3. Which of the following activities is involved in proper farm management?
 - A. selling fertile land
 - B. supervising work
 - C. growing cash crops
 - D. applying inorganic fertilizers
 4. Packaging is important because it
 - A. preserves the quality of produce.
 - B. makes the product available.
 - C. helps to identify the market.
 - D. helps to fix the price on the produce.
 5. Which of the following is a sign of damage caused by hailstorm in crop production?
 - A. wilting of crops
 - B. lodging of crops
 - C. burning of crops
 - D. wiping up entire crops
 6. Which of the following methods of weeding removes weeds by covering them with soil?
 - A. uprooting
 - B. slashing
 - C. banking
 - D. light hoeing
 7. Why do farmers plant trees along the boundaries of arable crops?
 - A. to beautify the boundaries
 - B. to control soil erosion
 - C. to protect crops from thieves
 - D. to provide timber
 8. Which of the following is a sign of lack of potassium in crops?
 - A. purple leaves
 - B. yellow leaves
 - C. stunted growth
 - D. weak stems
 9. How is maize streak disease controlled?
 - A. weeding early
 - B. spacing maize correctly
 - C. planting maize early
 - D. uprooting diseased plants
- Figure 1** is a diagram showing a learner propagating a fruit tree. Use it to answer **Questions 10 and 11**.
- 
- Figure 1**
10. Which of the following methods of propagation is the learner using?
 - A. use of sucker
 - B. budding
 - C. use of seed
 - D. grafting

Continued/...

11. The other fruit tree that can be propagated by the method in Figure 1 is.
- apple.
 - pineapple.
 - guava.
 - orange.
12. Which of the following is the reason for trimming flowers?
- maintaining plant growth
 - reducing pests
 - improving quality of flowers
 - making a desirable shape
13. Why should the materials for mulching be placed away from the seedlings in a woodlot?
- to improve soil fertility
 - to control the growth of weeds
 - to prevent the attraction of termites
 - to control the rate of evaporation
14. Which of the following factors should be considered when interplanting arable crops with trees that have large canopy?
- spacing between the trees
 - type of trees and crops
 - fertility of the soil
 - spacing between the arable crops
15. What type of flowers are "money plants"?
- shrubs
 - creepers
 - trees
 - ground covers
16. What is the function of a hitch in a plough?
- holds all parts of a plough
 - sets the depth of ploughing
 - cuts the soil into thin layer
 - attaches the plough to the chain
17. Which of the following farm animals are used as a source of power?
- pigs
 - donkeys
 - rabbits
 - goats
18. Which of the following products can be made from animal skin?
- bag
 - plate
 - fertilizer
 - pot
19. Which of the following is a way of maintaining a fish pond?
- painting walls
 - applying lime
 - killing parasites
 - filling cracks
20. How can a farmer control ticks in cattle?
- dusting with chemicals
 - de-worming
 - dipping
 - not grazing them in dambos

Continued/...

SCIENCE AND TECHNOLOGY

21. Why is it advisable to wash fruits before eating?
- to improve quality
 - to prevent germs
 - to improve taste
 - to improve flavour
22. Which of the following is a sign of scurvy?
- slow growth
 - rough skin
 - soft bones
 - pale hands
23. Heat in the body is distributed by
- lungs.
 - sweat.
 - blood.
 - air.
24. Which of the following food combinations is a balanced diet?
- potatoes, bananas and meat
 - spinach, pawpaws and rape
 - cassava, bananas and potatoes
 - spinach, meat and beans
25. Which of the following foods can help to improve eye sight?
- carrots
 - beans
 - pineapples
 - bananas
26. Why should fish be turned from time to time during roasting?
- to make it tender
 - to improve its taste
 - to cook it evenly
 - to improve its flavour

Figure 2 is a diagram showing a ray of light passing through a block of glass. Use it to answer **Questions 27 and 28**.

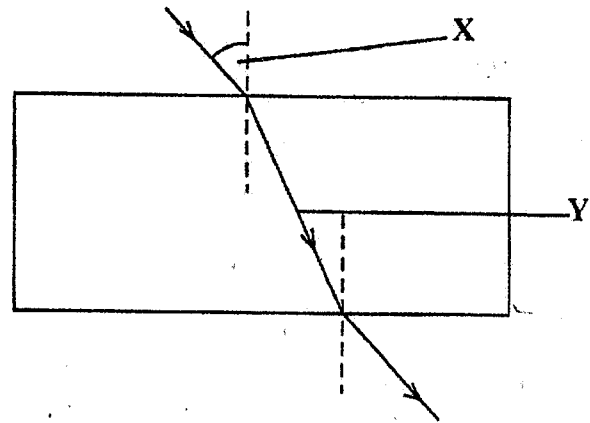


Figure 2

27. What is the name of the ray of light marked Y?
- reflected ray
 - normal ray
 - incident ray
 - refracted ray
28. What is the name of the angle marked X?
- angle of refraction
 - angle of incidence
 - normal angle
 - angle of reflection
29. The liquid that contains sperms is
- zygote.
 - fluid.
 - amnion.
 - semen.

Continued/...

Figure 3 is a diagram showing parts of the human digestive system. Use it to answer Questions 30 and 31.

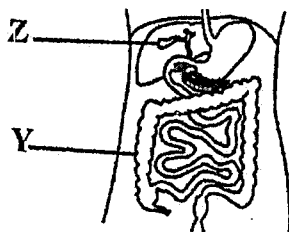


Figure 3

30. The part labelled Z is
 A. gall bladder.
 B. rectum.
 C. gullet.
 D. epiglottis.
31. What is the function of the part labelled Y?
 A. stores food in the body
 B. directs food in the body
 C. absorbs water from food
 D. produces digestive juices
32. Which of the following would increase the mechanical advantage of a pulley?
 A. greasing the pulley
 B. increasing the number of pulleys
 C. using a longer rope
 D. changing direction of effort
33. Which of the following liquids can dissolve in vaseline?
 A. water
 B. paraffin
 C. milk
 D. orange juice
34. Which of the following seeds can be dispersed by wind?
 A. cotton
 B. blackjack
 C. mango
 D. guava
35. Which of the following is the function of ovaries in the human body?
 A. transporting wastes
 B. storing urine
 C. producing sperms
 D. producing eggs
36. Which of the following is the **third** step in laundering?
 A. washing
 B. drying
 C. soaking
 D. sorting
37. "Suffocation" can be defined as a situation where
 A. air cannot get into the mouth or nose.
 B. air cannot pass in and out of the lungs.
 C. a person breathes in contaminated air.
 D. a person breathes using the mouth only.
38. Which of the following activities can destroy the environment?
 A. poaching
 B. composting
 C. constructing dams
 D. planting trees
39. Which of the following is a disadvantage of processing food?
 A. loss of quality
 B. loss of flavour
 C. loss of texture
 D. loss of nutrients
40. Which of the following is a sign of marasmus?
 A. poor appetite
 B. bowed legs
 C. stunted growth
 D. swollen body

Continued/...

Section B (60 marks)

AGRICULTURE

41. a. State any **three** characteristics of commercial farming.

(3 marks)

- b. Give any **three** reasons why growing crops is important on a farm.

(3 marks)

- c. Give any **two** examples of capital items on a farm.

(2 marks)

42. a. (i) Name **one** way in which termites damage young trees in an agro-forestry plot.

(1 mark)

- (ii) State **two** ways of controlling termites in an agro-forestry plot.

(2 marks)

42. (Continued)

- b. (i) Name **three** tools used for transplanting seedlings.

(3 marks)

- (ii) Give a reason why mulching is important after transplanting seedlings.

(1 mark)

43. a. Give a reason why cassava should be kept dry.

- b. Explain how sweet varieties of cassava are prepared.

(3 marks)

44. Figure 4 is a diagram of an indigenous farm technology.



Figure 4

- a. Identify the indigenous farm technology in figure 4.

(2 marks)

Continued/...

44. (Continued)

- b. Give the use of the indigenous farm technology in **figure 4**.

(1 mark)

45. a. Name the **two** feeding habits of goats.

(2 marks)

- b. State the **three** characteristics of goats suitable for breeding.

(3 marks)

46. Give **three** factors to be considered when designing a fish pond.

(3 marks)

Continued/...

SCIENCE AND TECHNOLOGY

47. a. (i) List any **three** foods that can be preserved by canning.

(3 marks)

- (ii) State **one** disadvantage of canning method of preserving food.

(1 mark)

- b. **Figure 5** is a diagram of a traditional technology for sending messages.

**Figure 5**

- (i) Identify the technology in **figure 5**.

- (ii) Give **one** way in which the technology in **figure 5** can be used to send messages.

(1 mark)

- (iii) State **one** disadvantage of the technology in **figure 5**.

(1 mark)

(1 mark)

Continued/...

48. a. Give any three characteristics of reptiles.

(3 marks)

- b. Classify the following invertebrates into **protozoa** and **arthropods**:
plasmodium, spider, amoeba and crab.

protozoa: _____

arthropods: _____

(4 marks)

49. Figure 6 is a diagram showing parts of a flower.

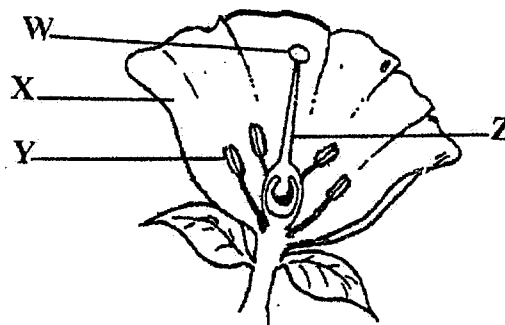


Figure 6

- a. Name the parts labelled W and Z.

W: _____ (1 mark)

Z: _____ (1 mark)

- b. What are the functions of the parts labelled X and Y?

X: _____

_____ (1 mark)

Y: _____

_____ (1 mark)

Continued/...

50. Draw a bean seed and label the **three** external parts.

(4 marks)

51. a. List any **three** foods suitable for old people.

(3 marks)

- b. Give any **two** factors to consider when planning meals for old people.

(2 marks)

Continued/...

52. a. State any **one** advantage of the frying method of cooking.

(1 mark)

- b. Give **two** reasons why the frying method of cooking is **not** good for a sedentary worker.

(2 marks)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2019 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 10 May

Time Allowed: 2 hours
8:00 – 10:00 am

Name of Candidate: _____
(Surname First)

Name of School: _____


Instructions

1. This paper contains 12 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 paper 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** and **examination number** on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. To which sub-branch of agriculture does the growing of vegetables **only** belong?
 - A. horticulture
 - B. pomoculture
 - C. olericulture
 - D. arboriculture
 2. Which of the following plants is feed for fish in a pond?
 - A. shrub
 - B. star grass
 - C. witch weed
 - D. plankton
 3. Which of the following crops is a variety of cassava?
 - A. Malimba
 - B. Kakoma
 - C. Baka
 - D. Manyokola
- Figure 1 is a diagram showing a learner tending flowers. Use it to answer questions 4 and 5.
- 
- Figure 1**
4. Identify the method of tending flowers.
 - A. trimming
 - B. pruning
 - C. thinning
 - D. cutting
 5. Why is this method important in flower production?
 - A. controls diseases
 - B. adds nutrients
 - C. restricts growth
 - D. reduces competition
 6. Which of the following is the **last** step when transplanting mangoes?
 - A. removing the polythene tube
 - B. mulching the seedlings
 - C. pressing soil around the seedlings
 - D. digging out the seedlings
 7. Which of the following is a solution to the problem of **seasonality** of produce in agricultural marketing?
 - A. selling the produce quickly
 - B. storing the produce when plenty
 - C. packaging the produce in containers
 - D. keeping the produce near market
 8. Which of the following is a safety measure when using a sprayer?
 - A. keeping the control tap tight
 - B. cleaning the sprayer after use
 - C. keeping the sprayer in a dry place
 - D. applying grease to the sprayer

Continued/...

9. Which of the following factors is necessary for selecting good seeds for planting?
- colour
 - size
 - shape
 - wholeness
10. Which of the following is a sign of anthrax in goats?
- quick breathing
 - blisters on feet
 - swelling of stomach
 - saliva coming out
11. Why is it important to advertise fish for sell before harvesting?
- to know the fish customers
 - to transport the fish easily
 - to determine price of the fish
 - to package the fish
12. Why should a cage for a **buck** be slightly larger than for a **doe**?
- to have enough ventilation
 - to control parasites
 - to keep more rabbits
 - to ease mating
13. Which of the following layers of soil has the **highest** organic matter?
- parent rock
 - weathered rock
 - top soil
 - sub soil
14. What is the use of a **beam** in a ridger?
- holds all parts of the ridger
 - attaches the ridger to the chain
 - pushes the soil to each side
 - helps to move the ridger

15. Which of the following is a leaf vegetable?
- egg plant
 - lettuce
 - tomato
 - carrot

The following information was obtained on a vegetable farm. Use it to answer questions 16 and 17.

- Sold 100 kg tomatoes at K10 000.00
- Bought 25 kg CAN at K10 000.00
- Bought tomato seeds at K400.00
- Sold 50 kg rape at K2000.00

16. What were the total sales?
- K10 400
 - K12 000
 - K20 000
 - K22 400
17. What was the farmer's profit?
- K1 600
 - K2 000
 - K8 000
 - K9 600
18. Which of the following breeds of cattle can be cross bred with Malawi Zebu to increase milk production?
- Brahman
 - Herefold
 - Fresian
 - Charolais
19. Which of the following is the characteristic of indigenous trees?
- require more care
 - have soft timber
 - easily attacked by diseases
 - withstand drought

Continued/...

20. Which of the following is the function of a lance in a sprayer?
- keeping spray
 - controlling spray
 - delivering spray
 - filtering spray

SCIENCE AND TECHNOLOGY

21. Which of the following diseases can be controlled by eating a balanced diet?
- malaria
 - diarrhoea
 - marasmus
 - polio
22. Which of the following technologies makes distant objects look bigger?
- mirror
 - microscope
 - periscope
 - telescope
23. Which of the following animals is a reptile?
- tortoise
 - toad
 - Frog
 - mouse
24. Figure 2 shows a learner lifting a stone using a beam. Use it to answer questions 24 and 25
25. Which of the following ways could make the work easier?
- using a shorter beam
 - pushing the beam harder
 - increasing the distance between T and U
 - increasing the distance between T and S
26. Which of the following ways can improve the sound transmitted by a string telephone?
- loosening the string
 - tightening the string
 - making knots on the string
 - lengthening the string
27. Which of the following parts of a flower develops into a seed after fertilization?
- ovule
 - ovary
 - petal
 - stigma
28. Which of the following is a sign of scurvy?
- tiredness
 - bleeding of gums
 - rough skin
 - pale hands

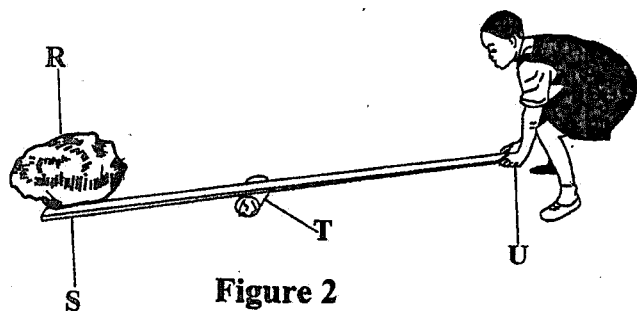


Figure 2

24. Which of the following letters represents the effort?
- | | |
|------|------|
| A. R | C. T |
| B. S | D. U |

Continued/...

29. Which of the following diseases can be prevented by practicing kitchen hygiene?

A. goiter
B. malaria
C. scabies
D. diarrhoea

Figure 3 is a diagram showing external parts of fish. Use it to answer questions 30 and 31

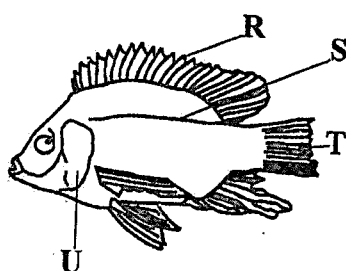


Figure 3

30. Identify the part marked R

A. anal fin
B. scales
C. dorsal fin
D. operculum

31. Which of the following parts of the fish helps it to move forward?

A. T
B. U
C. R
D. S

32. It is advisable to wear white clothes on a sunny day in order to

A. feel warm.
B. be seen from far.
C. feel cool.
D. look smart.

33. Which of the following is the cause of chocking?

A. breathing in poisonous gases
B. food entering the wind pipe
C. person falling down
D. Eating food containing chemicals

34. Which of the following parts of the human brain controls digestion?

A. cerebellum
B. cerebrum
C. spinal cord
D. medulla oblongata

35. Which of the following groups of people is a sedentary worker?

A. manager
B. farmer
C. brick moulder
D. house cleaner

36. Which of the following mixtures can be separated by winnowing?

A. sand and salt
B. grains and husks
C. water and paraffin
D. sand and iron fillings

37. Why does a vacuum flask have a shiny inner surface?

A. to reduce loss of heat
B. to beautify the flask
C. to transfer heat
D. to strengthen the flask

38. Which of the following parts of blood is used for clotting?

A. plasma
B. red blood cells
C. platelets
D. white blood cells

39. Which of the following foods is suitable for lacto vegetarians?

A. pumpkin
B. yoghurt
C. pepper
D. cabbage

40. Rickets in children can be prevented by eating food rich in
- A. vitamin C.
 - B. iron.
 - C. iodine.
 - D. vitamin D.

Section B (60 marks)

AGRICULTURE

41. a. Why should farmers keep records of their various farming activities? Give any two reasons.

(2 marks)

- b. Mention any two factors that should be considered when choosing the type of enterprise to engage in.

(2 marks)

- c. State any one way of improving availability of water for agriculture production.

(1 mark)

42. a. Give one way in which each of the following activities is important in tree nursery management:

- (i) thinning

(1 mark)

Continued/ ..

42. a. (Continued)

(ii) hardening off

(1 mark)

b. Figure 4 is a diagram showing a learner propagating fruits. Use it to answer questions that follow.



Figure 4

(i) Identify the method of propagating fruits.

(1 mark)

(ii) Give the two procedures to be followed when using this method of propagating fruits.

(2 marks)

43. a State any two ways of maintaining a fish pond.

(2 marks)

Continued/...

43. (Continued)

b. Why is clay soil suitable for constructing a fish pond?

(2 marks)

c. Figure 5 is a diagram of a chicken that has been attacked by a disease. Use it to answer questions that follow.



Figure 5

(i) Name the disease that has attacked the chicken

(1mark)

(ii) State any two signs of the disease.

(2 marks)

44. a. Give a reason why water in a bucket with fingerings must have the same temperature as water in a pond during stocking.

(2 marks)

Continued/....

- b. Write down any **two** characteristics of cattle suitable for beef production.

(2 marks)

45. a. Prepare **one** balanced feed for layers of 17 weeks onwards using the following feeds: egg shell, maize meal, maize bran, lime, bean meal and fish meal.

- b. Explain how **cross breeding** improves cattle production.

(3 marks)

46. a. Name any **one** use of a sickle on a farm.

(3 marks)

(1 mark)

- b. Why should a farmer wear protective materials when spraying chemicals? Give two reasons

(2 marks)

Continued/...

SCIENCE AND TECHNOLOGY

47 a. State one characteristic of a compound leaf.

(1 mark)

b. Classify the following invertebrates into **protozoa** and **anthrapods**: amoeba, millipede, crab, spider and plasmodium.

Protozoa : _____

Anthrapods : _____

(5 marks)

48 a. State any two properties of gases.

(2 marks)

b. Define the term "solute".

(1 mark)

c. **Figure 6** is a diagram of the external parts of a human eye. Use it to answer questions that follow.

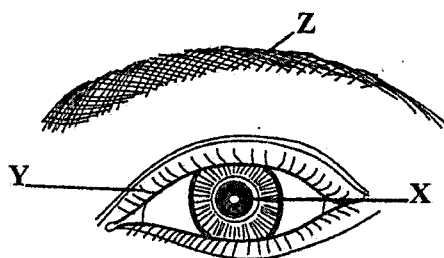


Figure 6

(i) Name the parts labelled X and Z

X : _____

Z : _____

(2 marks)

Continued/...

48. b. (Continued)

(ii) What is the function of the part labelled Y?

(1 mark)

c State any two ways of caring for the eye.

(2 marks)

49 a. Give one function of the stomach in the human body.

(1 mark)

b. Name two examples of hinge joints.

(2 marks)

50 a. State any one cause of suffocation.

(1 mark)

b. Explain how electricity is produced using solar energy.

(2 marks)

Continued/.

- 51 a. State any two disadvantages of improvised classroom technologies.

(2 marks)

- b. Mention any two ways of keeping food safe in the kitchen.

(2 marks)

- 52 a. Name any two good habits of eating food.

(2 marks)

- b. State any two ways of preventing kwashiorkor.

(2 marks)

- c. Write down any two guidelines for planning meals for manual workers.

(2 marks)

END OF QUESTION PAPER

This paper contains 12 printed pages.



EXAMINATION NO.: _____
THE MALAWI NATIONAL EXAMINATIONS BOARD

2018 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 18 May

**Time Allowed: 2 hours
8:00 – 10:00 am**

Name of Candidate: _____
(Surname First)

Name of School: _____

Instructions

- 1. This paper contains 12 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 paper 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** and **examination number** on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. To which sub-branch of crop production does the growing of mangoes belong?
 - A. olericulture
 - B. floriculture
 - C. silviculture
 - D. pomoculture
2. Which of the following types of fish survives in salty water?
 - A. mphende
 - B. chambo
 - C. mlamba
 - D. chilunguni
3. Which of the following crops is a legume?
 - A. maize
 - B. beans
 - C. rice
 - D. sorghum

Figure 1 is a diagram of a learner harvesting maize. Use it to answer Questions 4 and 5.

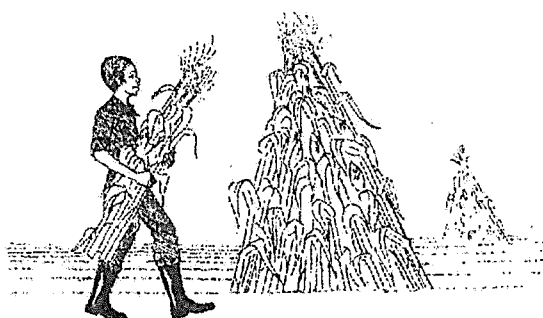


Figure 1

4. Identify the method of harvesting maize.
 - A. plucking
 - B. cutting
 - C. stooking
 - D. digging

5. Why is this method recommended to farmers?
 - A. to allow the cobs to dry quickly
 - B. to allow farmers to kill more mice
 - C. to protect the maize from thieves
 - D. to protect the maize from fire
6. When is hardening off in tree nurseries recommended?
 - A. early in the morning
 - B. before transplanting
 - C. late in the afternoon
 - D. after germination
7. Which of the following ways can help a farmer when dry spells destroy crops?
 - A. harvesting the crops early
 - B. irrigating the crops
 - C. insuring the crops
 - D. growing more than one crop
8. Why are farmers advised to face away from wind when spraying chemicals to crops?
 - A. to spray the chemicals fast
 - B. to spray more chemicals
 - C. to prevent clothes from chemicals
 - D. to avoid inhaling chemicals
9. Which of the following flowers are used for scaring away harmful pests?
 - A. marigold
 - B. periwinkle
 - C. dahlia
 - D. aloe vera

Continued/...

10. Which of the following breeds of goats is kept for milk production?
- Angora goat
 - Gaddi goat
 - Saanen goat
 - Kamori goat
11. Why should farmers sell their crops when they are scarce?
- to prevent them from thieves
 - to make them available to everyone
 - to make profit
 - to avoid hunger
12. Which of the following ways can prevent tape worms in rabbits?
- killing all infected rabbits
 - cleaning rabbit houses
 - changing wet litters
 - isolating sick rabbits
13. Which of the following nutrients is required by plants in large quantities?
- nitrogen
 - calcium
 - chlorine
 - copper
14. Which of the following parts of a plough sets depth of ploughing?
- share
 - handle
 - hake
 - hitch
15. Which of the following crops is a fruit vegetable?
- lettuce
 - onion
 - eggplant
 - sweet potato
16. What is the **best** time to start keeping farm records?
- soon after planting crops
 - soon after selling crops
 - when farm inputs are bought
 - when farming activities have started
17. Fish in a pond are fed at the rate of 5% of body weight daily. If the total weight of all the fish in the pond is 200 kg, the amount of feed needed per day is
- 5 kg.
 - 10 kg.
 - 100 kg.
 - 200 kg.
18. Which of the following ways can control East Coast Fever in cattle?
- dipping
 - quarantine
 - burying infected cattle
 - restricting movement
19. Which of the following pests attack young maize plants?
- aphids
 - army worms
 - weevils
 - rodents
20. Why should a farm-cart be fitted with reflectors?
- to avoid accidents
 - to attract customers
 - to scare away thieves
 - to provide light at night

Continued/...

SCIENCE AND TECHNOLOGY

21. Scurvy can be prevented by eating foods rich in
- A. vitamin C.
 - B. vitamin A.
 - C. iodine.
 - D. iron.
22. Which of the following technologies is used for sending and receiving messages?
- A. whistle
 - B. decoder
 - C. cellphone
 - D. drum
23. Which of the following characteristics shows that a bat is a mammal?
- A. scaly skin
 - B. laying eggs
 - C. presence of feathers
 - D. bearing live young ones

Figure 2 is a diagram of a flower.
Use it to answer Questions 24 and 25.

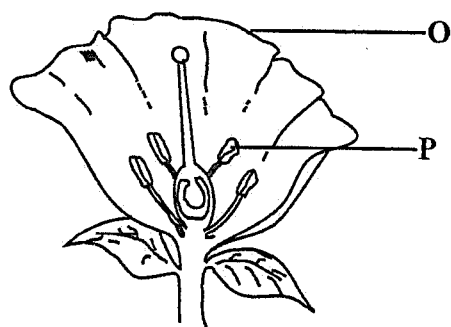


Figure 2

24. The part labelled **P** is called
- A. sepal.
 - B. anther.
 - C. filament.
 - D. petal.

25. What is the function of the part labelled **O**?
- A. holding the flower to the whole plant
 - B. attracting pollination agents to the flower
 - C. protecting the developing flower
 - D. producing pollen grains
26. Which of the following instruments produces sound by beating?
- A. whistle
 - B. shaker
 - C. flute
 - D. drum
27. Which of the following seeds are dispersed by water?
- A. bean seeds
 - B. cotton seeds
 - C. black jack seeds
 - D. coconut seeds
28. Which of the following diseases is an infection of the skin?
- A. scabies
 - B. trachoma
 - C. flue
 - D. conjunctivitis
29. Which of the following is an advantage of a traditional kitchen?
- A. easy to clean
 - B. easy to maintain
 - C. has enough space
 - D. has enough ventilation

Continued/...

Figure 3 is a diagram of vertebrate animals. Use it to answer Questions 30 to 32.

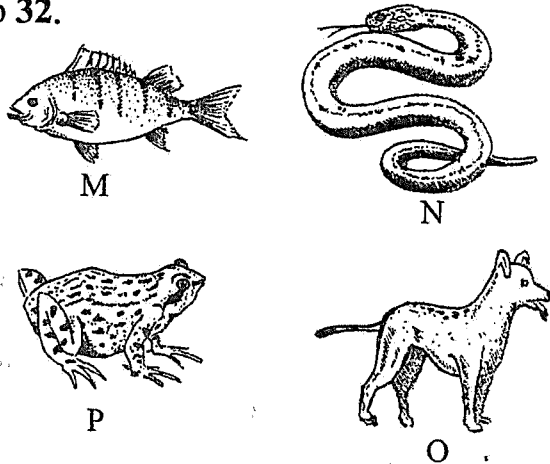


Figure 3

30. Which of these vertebrates lives in water **only**?
- M
 - N
 - O
 - P
31. The vertebrate labelled N belongs to
- amphibians.
 - mammals.
 - fish.
 - reptiles.
32. Which of these vertebrates has mammary glands as one of its characteristics?
- M
 - N
 - O
 - P
33. Which of the following accidents can be prevented by taking liquids **slowly**?
- scald
 - sprain
 - choking
 - poisoning
34. The function of the cerebrum is to control
- speech.
 - balance.
 - digestion.
 - breathing.
35. What name is given to people who are recovering from illness?
- patients
 - convalescents
 - invalids
 - vegetarians
36. The substance that dissolves in another substance is called
- solvent.
 - solute.
 - solution.
 - suspension.
37. Which of the following parts of an electric circuit controls the flow of electricity?
- cell
 - bulb
 - switch
 - fuse
38. What is the function of red blood cells in the body?
- clotting blood
 - dissolving food
 - transporting oxygen
 - fighting germs
39. The cooking of food in hot oil is called
- frying.
 - stewing.
 - boiling.
 - baking.
40. Which of the following conditions is a sign of kwashiorkor?
- stunted growth
 - wasting of muscles
 - swollen body
 - good appetite

Continued/...

Section B (60 marks)

AGRICULTURE

41. a. List any **two** characteristics of subsistence farming.

(2 marks)

- b. State any **two** ways of advertising agricultural products.

(2 marks)

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

(2 marks)

42. a. Give any **two** reasons why it is important to prune trees in an agroforestry.

(2 marks)

Continued/...

42. (Continued)

- b. **Figure 4** is a diagram of a method of managing a woodlot. Use it to answer questions that follow.



Figure 4

- (i) Identify the method of managing the woodlot.

_____ (1 mark)

- (ii) Give any **two** reasons why the method of managing the woodlot is important.

_____ (2 marks)

43. a. State any **two** signs of overfeeding fish in a pond.

_____ (2 marks)

- b. Give **one** reason why it is important to feed fish in a pond at the same time and place each day.

_____ (1 mark)

Continued/...

43. (Continued)

- c. **Figure 5** is a diagram of a goat parasite. Use it to answer questions that follow.

**Figure 5**

- (i) Name the parasite.

_____ (1 mark)

- (ii) State any **two** ways in which the parasite causes damage to goats.

_____ (2 marks)

44. a. Give **two** end products that can be made from hoofs.

_____ (2 marks)

- b. Write down any **three** advantages of semi-intensive system of keeping chickens.

_____ (3 marks)

45. a. Classify the following breeds of cattle into **dairy** and **beef** breeds: Jersey, Brahman, Africander, Fresian and Hereford.

dairy breeds: _____

beef breeds: _____

(5 marks)

Continued/...

46. a. State any **one** safety measure to be followed when using a treadle pump.

(1 mark)

- b. List any **two** ways of maintaining a treadle pump.

(2 marks)

SCIENCE AND TECHNOLOGY

47. a. Give any **one** function of leaves in plants.

(1 mark)

- b. Construct a food chain for the following living things: birds, green grass, people and grasshopper.

(4 marks)

48. a. (i) Mention any **two** properties of liquids.

(2 marks)

- (ii) Name the process of changing water from liquid to solid.

(1 mark)

Continued/...

48. (Continued)

- b. **Figure 6** is a diagram of the human ear. Use it to answer questions that follow.

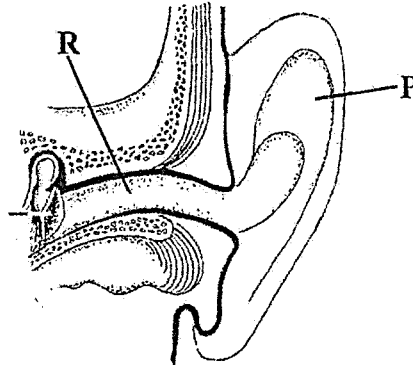


Figure 6

- (i) Name the parts labelled **P** and **R**.

P: _____

R: _____

(2 marks)

- (ii) What is the function of the part labelled **P**?

(1 mark)

- c. State any **two** ways of caring for the ear.

(2 marks)

49. a. Give **one** function of tendons in the human body.

(1 mark)

- b. List **two** examples of joints that allow rotational movements.

(2 marks)

Continued/...

2018

50. a. Name any **one** way of preventing suffocation.

(1 mark)

- b. State any **two** ways of caring for the brain.

(2 marks)

51. a. Give any **two** reasons why information and communication technology is important.

(2 marks)

- b. State **one** way in which each of the following technologies is important in preserving food:

- (i) freezing:

(1 mark)

- (ii) salting

(1 mark)

Continued/...

2018

EXAMINATION NO.: _____

Page 12 of 12

P163

52. a. Name any **two** food taboos.

(2 marks)

b. State any **two** signs of anaemia.

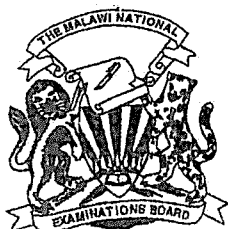
(2 marks)

c. List any **three** examples of sedentary workers.

(3 marks)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2017 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 19 May

Time Allowed: 2 hours

8:00 – 10:00 am

Name of Candidate: _____

(Surname First)

Name of School: _____

Instructions

1. This paper contains 12 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 paper 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** and **examination number** on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. Which of the following is a characteristic of sand soil?
 - A. holds a lot of water
 - B. feels sticky when wet
 - C. has large particles
 - D. has medium air spaces
2. Which of the following is a way of maintaining a hand trowel?
 - A. oiling
 - B. sharpening
 - C. painting
 - D. washing

Figure 1 is a diagram of a crop attacked by a pest. Use it to answer **Questions 3** and **4**.

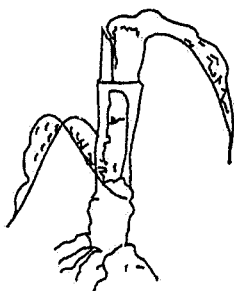


Figure 1

3. Identify the pest.
 - A. weevil
 - B. army worm
 - C. locust
 - D. stalk borer
4. Which part of the crop is attacked by the pest?
 - A. grain
 - B. leaf
 - C. stalk
 - D. root

5. Which of the following activities takes place during land preparation?
 - A. ploughing
 - B. weeding
 - C. banding
 - D. thinning
6. Which of the following is a sign of new castle disease in chicken?
 - A. sores on feet
 - B. blood in droppings
 - C. loss of balance
 - D. blue wattles

Figure 2 is a diagram of a fish predator. Use it to answer **Questions 7** and **8**.

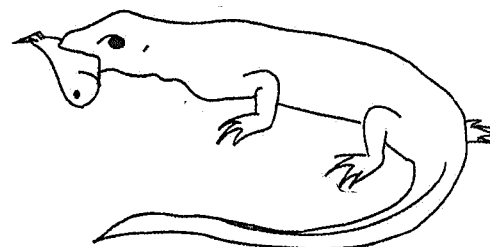


Figure 2

7. What is the name of the predator?
 - A. otter
 - B. grey heron
 - C. monitor lizard
 - D. king fisher
8. Which of the following ways can control the predator?
 - A. setting traps
 - B. scaring it
 - C. destroying its nest
 - D. applying lime

Continued/...

9. To which sub-branch of agriculture does the growing of both fruits and vegetables belong?

A. olericulture
B. pomoculture
C. floriculture
D. horticulture

Figure 3 is a diagram of a farm tool. Use it to answer **Questions 10** and **11**.



Figure 3

10. What is the name of the farm tool?
- A. rake
B. slasher
C. handtrowel
D. handfork
11. Which of the following is the use of the tool?
- A. levelling a nursery bed
B. loosening soil in a vegetable garden
C. lifting seedlings from a seed bed
D. harvesting vegetables

Figure 4 is a diagram showing a method of fruit propagation. Use it to answer **Questions 12** and **13**.

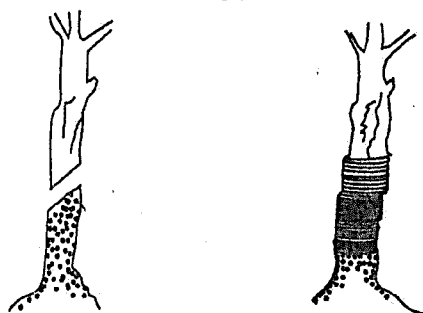


Figure 4

12. Identify the method of fruit propagation.
- A. grafting
B. budding
C. suckers
D. cuttings
13. Which of the following fruits can be propagated by the method?
- A. bananas
B. pineapples
C. granadillas
D. avocado pears

Figure 5 is a diagram of one of the risks associated with farm business. Use it to answer **Questions 14** and **15**.



Figure 5

14. Identify the type of risk shown in the diagram.
- A. floods
B. fire
C. weather change
D. pests and diseases

Continued/...

15. Which of the following is a way of managing the risk?
- A. market research
 - B. enterprise diversification
 - C. contract production
 - D. insurance
16. Why is it important to water vegetables in field beds?
- A. to reduce weed growth
 - B. to dissolve soil nutrients
 - C. to reduce spread of diseases
 - D. to control soil pests
17. Which of the following is a characteristic of a good cock for breeding?
- A. roomy body
 - B. strong legs
 - C. bright eyes
 - D. moist vent
18. Which of the following types of soil is suitable for vegetables?
- A. loam soil
 - B. sandy soil
 - C. sandy loam soil
 - D. clay soil

Figure 6 is a diagram of a common pest of groundnuts. Use it to answer Questions 19 and 20.



Figure 6

19. What is the name of the pest?
- A. termite
 - B. grasshopper
 - C. beetle
 - D. aphid
20. Which of the following crop diseases is spread by the pest?
- A. leaf spot
 - B. rosette
 - C. leaf bright
 - D. black rot

SCIENCE AND TECHNOLOGY

21. Which of the following diseases is associated with loose teeth?
- A. anaemia
 - B. scurvy
 - C. kwashiorkor
 - D. marasmus
22. To which group of invertebrates do snails belong?
- A. protozoa
 - B. worms
 - C. arthropods
 - D. molluscs
23. Which of the following problems of the human breathing system may be caused by covering one's face with a plastic bag?
- A. choking
 - B. smothering
 - C. asthma
 - D. tuberculosis

Continued/...

Figure 7 is a diagram of a human brain. Use it to answer Questions 24 and 25.

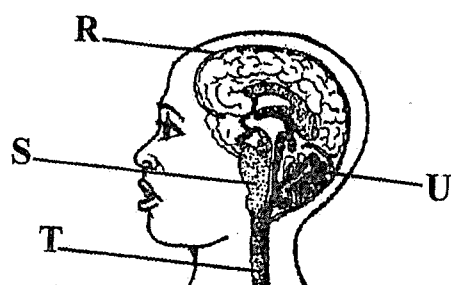


Figure 7

24. Identify the part marked T.
- spinal cord
 - cerebrum
 - medulla oblongata
 - cerebellum
25. Which of the following parts controls blood pressure?
- R
 - S
 - T
 - U
26. Which of the following should **not** be considered when using flowers to improve the home?
- type of occasion
 - size of the flower
 - shape of the table
 - colour of the flower
27. Which of the following is a skin disease?
- diarrhoea
 - scabies
 - tuberculosis
 - malaria
28. Which of the following is a non flowering plant?
- rice
 - ferns
 - tobacco
 - peas
29. Which of the following diseases can be prevented by washing fruits before eating?
- goitre
 - malaria
 - anaemia
 - diarrhoea
30. Which of the following animals is a vertebrate?
- grasshopper
 - protozoa
 - molluscs
 - fish
31. Which of the following can conduct electricity?
- sugar solution
 - salt solution
 - milk
 - paraffin
32. Which of the following people is a manual worker?
- manager
 - secretary
 - labourer
 - lawyer
33. The term "decoding" means;
- inputting a message.
 - sending messages.
 - receiving information.
 - interpreting a message.

Figure 8 is a diagram showing a type of root system. Use it to answer **Questions 34 and 35**.

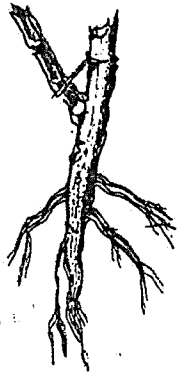


Figure 8

34. Identify the type of the root system.
- A. fibrous root
 - B. tuberous root
 - C. tap root
 - D. adventitious root
35. Which of the following plants has this type of root system?
- A. cassava
 - B. onion
 - C. beans
 - D. maize

Figure 9 is a diagram of a microscopic organism. Use it to answer **Questions 36 and 37**.

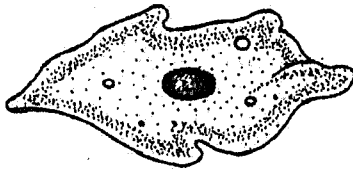


Figure 9

36. The name of the microscopic organism is
- A. plasmodia.
 - B. trypanosome.
 - C. amoeba.
 - D. octopus.
37. To which group of invertebrates does the organism belong?
- A. worms
 - B. molluscs
 - C. anthropods
 - D. protozoa
38. Which of the following is a plant fibre?
- A. wool
 - B. linen
 - C. aluminium
 - D. silk
39. Which of the following methods can separate a mixture of iron fillings and flour?
- A. filtration
 - B. distillation
 - C. magnetism
 - D. winnowing
40. Which of the following is a sign of night blindness in a person?
- A. tiredness
 - B. pale hands
 - C. bleeding of gums
 - D. dry and rough skin

Continued/...

Section B (60 marks)

AGRICULTURE

41. a. Define the term "farm records".

(1 marks)

- b. State any **two** ways in which records are important on a farm.

(2 marks)

- c. Name any **two** factors of production.

(2 marks)

42. a. Give any **two** farm tools for transplanting flower seedlings.

(2 marks)

- b. (i) Name any **one** recommended method of weeding in an agroforestry plot.

(1 mark)

- (ii) Give any **two** advantages of including indigenous fruit trees in an agroforestry plot.

(2 marks)

Continued/...

42. (Continued)

- c. State any **two** examples of weeds in a groundnut field.

(2 marks)

43. a. (i) Define the term "irrigation".

(1 mark)

- (ii) Describe how sprinkler irrigation is carried out.

(3 marks)

- b. Name the disease of groundnuts that is controlled by each of the following methods:

- (i) early planting

(1 mark)

- (ii) practising crop rotation

(1 mark)

- c. State any **one** function of a rake.

(1 mark)

Continued/...

44. a. State any **two** characteristics of goats suitable for breeding.

(2 marks)

- b. Give **two** examples of an improved broiler chicken breeds kept in Malawi.

(2 marks)

45. a. Give any **two** reasons why it is important to improve crop production on the farm.

(2 marks)

- b. Explain any **one** way in which HIV and AIDS would affect the production of food at national level.

(2 marks)

46. State any **three** disadvantages of free range system of keeping poultry.

(3 marks)

SCIENCE AND TECHNOLOGY

47. a. Give any **two** agents of pollination.

(2 marks)

- b. State any **two** characteristics of wind pollinated flowers.

(2 marks)

48. a. Give any **two** ways of caring for a baby.

(2 marks)

- b. Explain any **two** factors to consider when planning meals for old people.

(4 marks)

49. a. (i) Give **one** reason for taking packed meals to school.

(1 mark)

- (ii) List **three** suitable materials used for carrying packed meals.

(3 marks)

49. (Continued)

- b. State any **one** disadvantage of food processing.

- c. Name any **two** ways of cleaning a home.

(1 mark)

(2 marks)

50. a. What is the difference between "a series" and "parallel" circuit?

(1 mark)

- b. State **two** reasons why it is important to report the findings of a scientific investigation.

(2 marks)

- c. State any **two** ways in which HIV and AIDS can be prevented.

(2 marks)

- d. State **one** reason why fabrics should be washed before dyeing.

(1 mark)

Continued/...

51. a. Explain the difference between “steaming” and “boiling” method of cooking.

(1 mark)

- b. Give any **two** characteristics of reptiles.

(2 marks)

52. a. Give any **two** factors that affect the rate of solubility of substances in water.

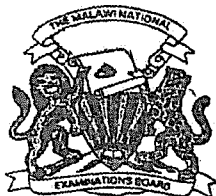
(2 marks)

- b. Name any **two** common accidents that can take place in a kitchen.

(2 marks)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2016 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 13 May

Time Allowed: 2 hours

8:00 – 10:00 am

Name of Candidate: _____
(Surname First)

Name of School: _____

Instructions

1. This paper contains 12 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 paper 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** and **examination number** on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. Which of the following is a sub-branch of agriculture under **animal production**?
 - A. agronomy
 - B. apiculture
 - C. olericulture
 - D. silviculture
 2. The principle of "substitution of inputs" helps to solve the problem of
 - A. how to produce.
 - B. what to produce.
 - C. where to sell.
 - D. when to sell.
 3. Which of the following factors of production refers to work done by people?
 - A. capital
 - B. land
 - C. labour
 - D. management
 4. **Figure 1** is a diagram showing one of the marketing functions.
-
- Figure 1**
5. Which of the following is **not** a physical farm record?
 - A. field operation records
 - B. labour records
 - C. crop records
 - D. sales records
 6. Which of the following is a characteristic of clay soil?
 - A. feels coarse
 - B. has medium air space
 - C. feels sticky when wet
 - D. has large air space
 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 activities can reduce pests and diseases in a tree nursery?
 - A. watering
 - B. mulching
 - C. supplying
 - D. weeding
 9. When should pruning of trees be done?
 - A. during the dry season
 - B. during the rain season
 - C. at the beginning of rain season
 - D. at the end of rain season

What marketing function is involved here?

- A. buying
- B. advertising
- C. transporting
- D. storage

Continued/...

10. Which system of agro-forestry involves planting trees and shrubs along the boundaries of arable crops?
- fodder bank
 - live fence
 - alley cropping
 - improved fallow

Figure 2 is a diagram showing a pest of cassava. Use it to answer Questions 11 and 12.

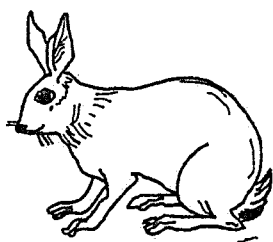


Figure 2

11. What is the name of the pest?
- mouse
 - hare
 - monitor lizard
 - otter
12. How can a farmer control the pest?
- weeding the garden
 - planting cassava early
 - using resistant varieties
 - trapping the pest
13. Why should some seeds be put in hot water first before sowing?
- to kill the pests
 - to prevent diseases
 - to soften the seed coats for easy germination
 - to prevent the pests from entering the seeds
14. Which of the following is a characteristic of a natural forest?
- trees are grown for a purpose
 - trees grow without uniformity
 - trees are cared for
 - trees are properly spaced
15. Which of the following ways can improve soil fertility?
- practising crop rotation
 - practising mono cropping
 - cultivating land every year
 - making ridges along the slope
16. Which of the following is the use of a rake?
- loosening soil
 - lifting seedlings
 - levelling beds
 - making holes
17. Why should a farmer paint a wheelbarrow?
- to reduce friction
 - to make it strong
 - to prevent rusting
 - to attract customers
18. Why should a fish pond have the deepest end of 1.5 m and the shallow end of 1 m deep?
- to allow the growth of water plants
 - to avoid parasites from multiplying
 - to avoid predators from reaching the fish
 - to create space for the growth of fish
19. What type of feed is given to a day old broiler?
- layers mash
 - growers mash
 - finisher mash
 - starter mash
20. What type of house is recommended for chickens kept under **free range system**?
- deep litter
 - semi intensive
 - battery cage
 - traditional

Continued/...

SCIENCE AND TECHNOLOGY

21. Which of the following crops has an erect stem?

A. pumpkin
B. pawpaw
C. sweet potato
D. banana

22. Which of the following is an example of a vegetable stain?

A. tea
B. egg
C. milk
D. paint

23. What type of force is produced as a result of rubbing two objects?

A. gravitational force
B. magnetic force
C. frictional force
D. elastic force

Figure 3 is a diagram showing changes of state of matter. Use it to answer Questions 24 and 25.

Solid \xrightarrow{P} Liquid \xrightarrow{Y}

Figure 3

24. What process is represented by the letter P?

A. melting
B. freezing
C. condensation
D. evaporation

25. How could the change of state of matter labelled Y be useful to human beings?

A. drying clothes
B. brewing beer
C. forming rain
D. preserving food

26. Which of the following sense organs is used for **touching**?

A. nose
B. skin
C. tongue
D. ear

27. Which of the following machines uses the principle of levers?

A. pulley
B. wedge
C. screw
D. spanner

28. The heart pumps blood to the lungs through

A. vena cava.
B. aorta.
C. pulmonary artery.
D. pulmonary vein.

29. Which of the following is a characteristic of wind pollinated flowers?

A. have no nector
B. have bright petals
C. produce scent
D. anthers are held firmly

30. Which of the following parts of a computer is used to enter information into the processor?

A. cursor
B. keyboard
C. monitor
D. mouse

Continued/...

31. A substance in which something dissolves is called
A. suspension.
B. solution.
C. solute.
D. solvent.
32. Which of the following is a modern food preservation technology?
A. sun drying
B. salting
C. canning
D. smoking
33. Which of the following technologies can help to conserve the environment?
A. solar panels
B. mortar and pestle
C. bow and arrow
D. canoo
34. Which of the following is a method of processing maize?
A. washing
B. salting
C. pounding
D. chopping
35. Which of the following diseases can be prevented by draining stagnant water around the home?
A. bilharzia
B. sleeping sickness
C. cholera
D. malaria
36. Which of the following groups of people is **mostly** affected by rickets?
A. pregnant women
B. young children
C. elderly people
D. manual workers
37. Which of the following is **not** a composition of blood?
A. plasma
B. veins
C. platelets
D. red blood cells
38. Why do **invalids** require little carbohydrates and fats in their diets?
A. They are fat people.
B. They have damaged tissues.
C. They use less energy.
D. They have weak bodies.
39. Which of the following is the **main** way of contracting HIV and AIDS?
A. sexual intercourse
B. sharing razor blades
C. using unsterilized injections
D. piercing ear using the same needle
40. Lack of **vitamin A** in the diet can cause
A. scurvy
B. beri-beri
C. diarrhoea
D. night blindness

Continued/...

Section B (60 marks)

AGRICULTURE

41. a. List any **three** cash crops grown in Malawi.

(3 marks)

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

(2 marks)

- c. State any **two** risks in a farm business.

(2 marks)

42. a. List any **two** activities involved when preparing land for growing fruits.

(2 marks)

- b. Name the type of irrigation suitable for each of the following crops:

(i) rice _____

(1 mark)

(ii) fruit trees _____

(1 mark)

- c. Give a reason why watering of seedlings before transplanting is important.

(1 mark)

Continued/...

43. a. Name any **two** factors to consider when designing an agro-forestry plot.

- b. Give a reason why:

(2 marks)

- (i) thinning of seedlings is important in an agro-forestry plot.

(1 mark)

- (ii) trees with a large canopy should be widely spaced in an agro-forestry plot.

(1 mark)

- c. (i) Write down any **two** examples of flowers that can be used as medicine.

(2 marks)

- (ii) Give any **two** reasons why pruning is important in flowers.

(2 marks)

Continued/...

2016

EXAMINATION NO.:

Page 8 of 12

P163

44. a. Name **one** use of a sprayer on the farm.

(1 mark)

b. State any **two** safety measures when using the sprayer.

(2 marks)

45. a. List any **two** products that can be made from milk.

(2 marks)

b. Write down any **two** characteristics of cattle suitable for milk production.

(2 marks)

46. Name any **three** animal husbandry practices.

(3 marks)

Continued/...

SCIENCE AND TECHNOLOGY

47. a. List any **two** agents of seed dispersal.

(2 marks)

- b. Give a reason why seed dispersal is important.

(1 mark)

48. a. Name any **two** groups of vertebrate animals.

(2 marks)

- b. Classify the following animals into **omnivores** and **carnivores**:
chicken, snake, pig and hawk.

omnivores: _____

carnivores: _____

(4 marks)

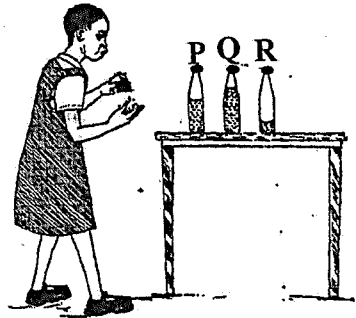
49. a. Draw an electric circuit with **two** cells, a switch and **two** bulbs in series.

(4 marks)

Continued/...

49. (Continued)

- b. **Figure 4** is a diagram showing a student who is about to blow bottles labelled **P**, **Q** and **R** containing different columns of air. Use it to answer the questions that follow.

**Figure 4**

- (i) What is the aim of the experiment?

(1 mark)

- (ii) Which of the bottles will produce the **lowest** sound?

(1 mark)

- (iii) Give a reason why one of the bottles will produce the lowest sound.

(1 mark)

50. a. (i) Name any **two** examples of refuse in the home.

(2 marks)

- (ii) Give a reason why refuse disposal is important in the home.

(1 mark)

Continued/...

50. (Continued)

- b. **Figure 5** is a diagram showing a technology for domestic use. Use it to answer the questions that follow.

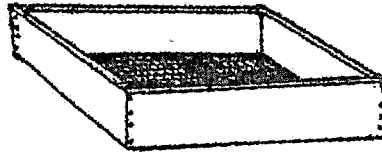


Figure 5

- (i) Identify the technology.

(1 mark)

- (ii) Give any **one** use of the technology.

(1 mark)

- c. How would each of the following materials be set into vibration?

(i) drum _____

(1 mark)

(ii) whistle _____

(1 mark)

51. a. Give any **two** meals in a day.

(2 marks)

- b. Name any **two** factors that should be considered when planning meals.

(2 marks)

Continued/...

2016

EXAMINATION NO.: _____
Page 12 of 12

P163

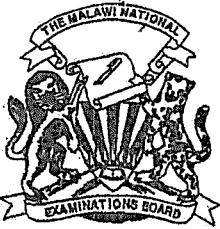
52. Complete the table by filling in food nutrients against the type of food eaten.

TYPE OF FOOD EATEN	FOOD NUTRIENT
fish	
rice	
nkhwani	

(3 marks)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2015 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Friday, 8 May

Time Allowed: 2 hours

8:00 – 10:00 am

Name of Candidate: _____
(Surname First)

Name of School: _____

Instructions

1. This paper contains 12 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 paper 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 and examination number on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

20
7/31

Section A (40 marks)

AGRICULTURE

1. Which of the following crops is suitable for sandy soils?
 - A. tobacco
 - B. rice
 - C. cassava
 - D. beans
2. Which of the following is **not** a common weed in flower gardens?
 - A. galisoga
 - B. black jack
 - C. star grass
 - D. witch weed
3. Which of the following is an effect of cutting down trees carelessly?
 - A. afforestation
 - B. deforestation
 - C. agroforestry
 - D. re-afforestation
4. Which of the following is a safety measure when using a plough?
 - A. good working condition of the machine
 - B. wear loose clothes
 - C. use young oxen
 - D. painting the plough before use
5. Why is vegetative cover important in crop production?
 - A. It provides firewood.
 - B. It provides timber.
 - C. It reduces pests.
 - D. It conserves soil.
6. Which of the following is a raw material for paper production?
 - A. cotton
 - B. sugar cane
 - C. trees
 - D. hides

Figure 1 is a diagram of a flower pest. Use it to answer Questions 7 and 8.



Figure 1

7. What is the name of the pest?
 - A. mealy bug
 - B. spider mite
 - C. white fly
 - D. slug
8. How does the pest cause damage to flowers?
 - A. cuts stems
 - B. sucks juices
 - C. eats flowers
 - D. eats roots
9. Which of the following layers of soil has most living organisms?
 - A. sub-soil
 - B. weathered rock
 - C. parent rock
 - D. top soil
10. Which of the following parts of a sprayer delivers the spray?
 - A. sieve
 - B. plastic container
 - C. lance
 - D. nozzle cup

Continued/...

11. Which of the following conditions is **not** necessary for seed germination?
- A. temperature
 - B. air
 - C. water
 - D. soil

Figure 2 is a diagram of a farm animal. Use it to answer **Questions 12 and 13**.

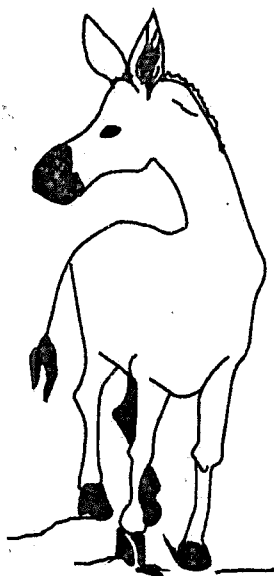


Figure 2

12. What is the name of the animal?
- A. sheep
 - B. horse
 - C. pig
 - D. cow
13. Which of the following is the advantage of keeping the animal?
- A. source of transport
 - B. source of meat
 - C. source of milk
 - D. source of wool

14. "Selection" as a method of improving local goats means
- A. mating related local goats with undesired characteristics.
 - B. breeding of desirable characteristics of local goats of the same breed.
 - C. mating of local goats with other cross breeds.
 - D. culling goats with undesirable characteristics.
15. Which of the following fertilizer application methods is recommended for flowers which are close together?
- A. dollop
 - B. banding
 - C. broadcasting
 - D. banking
16. Which part of a plough cuts the soil into thin layers?
- A. depth wheel
 - B. hitch
 - C. hake
 - D. share
17. Which of the following is an advantage of processing farm produce?
- A. maintains the grade of the produce
 - B. increases the supply of the produce
 - C. maintains the weight of the produce
 - D. increases the value of the produce

Continued/...

18. Which of the following is **not** an aim of agriculture as a business?
- A. increasing yield per unit area
 - B. growing of crops mainly for sale
 - C. reducing cost per unit area
 - D. maximising profits
19. Which of the following is a sign of foot and mouth disease?
- A. sudden death
 - B. quick breathing
 - C. salivation
 - D. coughing
20. Which of the following is a step in the procedure for grafting?
- A. Join the shoot to the root stock.
 - B. Plant both the shoot and root stock.
 - C. Plant a cutting which has nodes.
 - D. Make a T-slit on the stem.

SCIENCE AND TECHNOLOGY

21. Which of the following foods provide the body with energy?
- A. fish
 - B. pumpkin leaves
 - C. honey
 - D. beans
22. Animals with jointed legs are known as
- A. molluses.
 - B. annelida.
 - C. nematodes.
 - D. arthropods.
23. Lack of iron in the diet causes
- A. anaemia.
 - B. scurvy.
 - C. goitre.
 - D. rickets.
24. Which of the following can prevent the spread of cholera?
- A. eating a balanced diet.
 - B. washing hands before eating
 - C. draining stagnant water
 - D. keeping patients in well ventilated room
25. Where does the exchange of oxygen and carbon dioxide take place in the human body?
- A. bronchiole
 - B. trachea
 - C. alveoli
 - D. nostrils

Continued/...

26. Figure 3 is a diagram of an electric circuit.

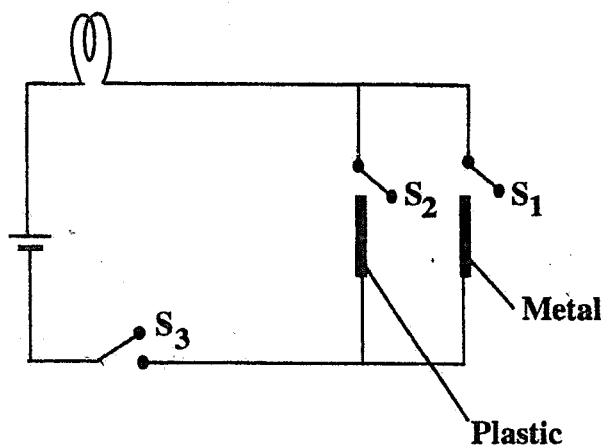


Figure 3

Which switch(es) should be closed for the bulb to light?

- A. S_1 and S_2
 - B. S_1 and S_3
 - C. S_2 and S_3
 - D. S_3 only
27. Which of the following is an advantage of preparing food by baking?
- A. it preserves soluble nutrients
 - B. it is cheap
 - C. it requires little attention
 - D. it uses less fuel
28. Which of the following organs regulates the amount of food transported by blood in the body?
- A. heart
 - B. kidney
 - C. lung
 - D. liver

29. Air sacs in the lungs are important because it is where
- A. the exchange of oxygen and carbon dioxide takes place.
 - B. urea is excreted from the body.
 - C. carbon dioxide is mixed up with oxygen.
 - D. the exchange of oxygen and urea takes place.
30. Which of the following is **not** a marketing technology?
- A. newspaper
 - B. flour sieve
 - C. telephone
 - D. ox-cart
31. Which of the following is the input device of a computer?
- A. central processing unit
 - B. monitor
 - C. mouse
 - D. printer
32. Airing clothes is done immediately after pressing in order to
- A. loosen dirt.
 - B. kill lice.
 - C. make them look nice.
 - D. dry them completely.

Continued/...

Figure 4 shows a method of preserving fish. Use it to answer Questions 33 and 34.

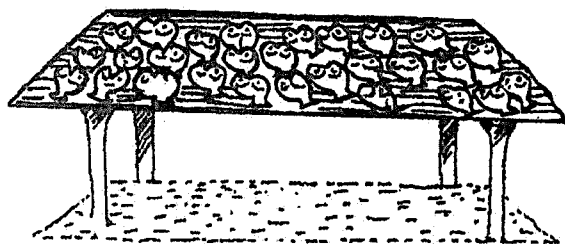


Figure 4

33. What name is given to this method of preserving fish?
- smoking
 - canning
 - sun-drying
 - salting
34. What is the advantage of this method over the other methods of preserving fish?
- It is cheap
 - It controls diseases
 - It is very hygienic
 - It improves quality of fish

Figure 5 is a diagram showing a method of family planning. Use it to answer Questions 35 and 36.

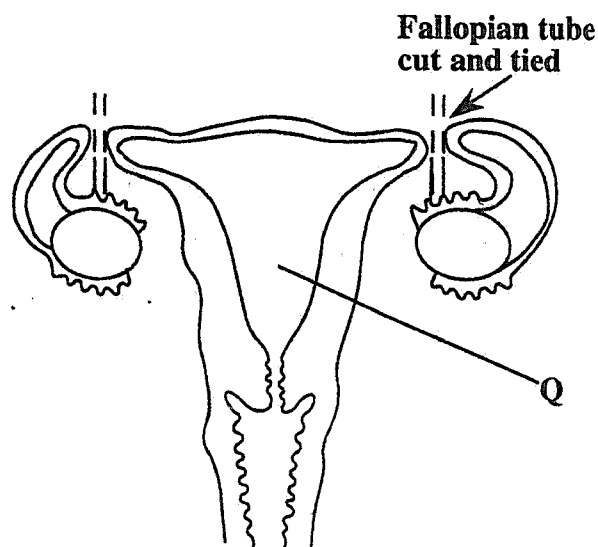


Figure 5

35. What is the name of this method of family planning?
- norplant
 - tubal ligation
 - spermicides
 - vasectomy
36. What name is given to the part marked Q?
- oviduct
 - vagina
 - ovary
 - uterus

Continued/...

37. Which of the following factors affect the speed at which a substance dissolves?
1. size of particles
 2. temperature of the solvent
 3. size of container
 4. rate of stirring
- A. 1, 2 and 3
B. 1, 2 and 4
C. 1, 3 and 4
D. 2, 3 and 4
38. What name is given to the process when gases change into liquids?
- A. evaporation
B. condensation
C. melting
D. freezing
39. In dim light the iris makes the pupil bigger in order to allow
- A. more light to get in.
B. less light to get in.
C. a person to see small objects.
D. a person to see objects at a distance.
40. Which of the following is a way of preserving flowers?
- A. pressing them with a hot iron
B. sun drying
C. dipping them in warm water
D. air drying

Section B (60 marks)**AGRICULTURE**

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

(3 marks)

Continued/...

41. (Continued)

- b. Explain the importance of ground water to plants.

(2 marks)

42. A learner wanted to find out if soil contains air. The learner had the following materials for conducting the experiment: clear plastic bottle, jag and soil sample.

- a. Name **one** material the learner forgot to include on the list of materials.

(1 mark)

- b. Why did the learner use a clear plastic bottle?

(1 mark)

- c. What would be the evidence to show that soil contains air?

(1 mark)

43. Explain any **one** way of maintaining a farm cart.

(2 marks)

44. a. Give any **four** characteristics of a good animal house.

(4 marks)

Continued/...

44. (Continued)

- b. Classify the following breeds of goats according to their use: Boer, Gaddi, Somali, Angora and Kamori.

Meat breeds: _____

Wool breeds: _____

(5 marks)

45. a. What is the difference between "demand" and "supply"?

(2 marks)

- b. Give any **three** problems of agricultural marketing.

(3 marks)

46. a. Explain how basin method of irrigation works.

(2 marks)

- b. Explain any **two** ways in which irrigation is important to a farmer.

(4 marks)

Continued/...

SCIENCE AND TECHNOLOGY

47. Explain how each of the following indigenous technologies could be improved.

An arrow: _____

(2 marks)

A pestle: _____

(2 marks)

48. Figure 6 is a diagram showing a longitudinal section of the human heart.

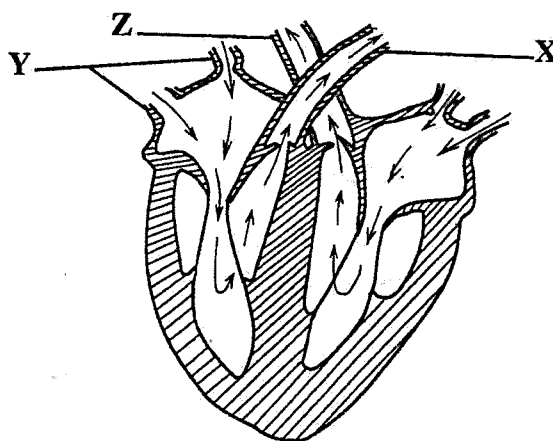


Figure 6

- a. Name the part labelled X.

(1 mark)

- b. State the function of the part labelled Z.

(2 marks)

- c. Explain the effect on a human being if the heart stopped pumping blood.

(3 marks)
Continued/...

49. Learners observed that bees were flying around flowers. Their teacher asked them to carry out a scientific investigation to find out why bees visit flowers.

a. Name the problem to be investigated.

(1 mark)

b. State the second and third steps the learners would use when conducting the investigation.

(i) Second step: _____

(1 mark)

(ii) Third step: _____

(1 mark)

c. Give any **two** resources the learners would use when conducting the investigation.

(2 marks)

50. Explain the importance of advertising in marketing toys.

(2 marks)

51. a. Give any **two** cultural practices that can lead to the spread of HIV.

(2 marks)

b. Explain any **one** way in which HIV and AIDS has affected the provision of health services in Malawi.

(2 marks)
Continued/...

52. a. Define "under nutrition".

(1 mark)

- b. Explain one effect of eating excess carbohydrates.

(2 marks)

- c. The table below shows how a learner classified different food items.

Protective foods	Energy giving foods	Body building foods
Potatoes	Paw paw	Grasshoppers
Bonongwe	Mice	

- (i) Name any one food item which was wrongly classified.

(1 mark)

- (ii) Classify the food items correctly:

Protective: _____

(2 marks)

Energy giving: _____

(1 mark)

Body building: _____

(2 marks)

END OF QUESTION PAPER

NB: This paper contains 12 printed pages.



EXAMINATION NO.:

THE MALAWI NATIONAL EXAMINATIONS BOARD

2014 PRIMARY SCHOOL LEAVING CERTIFICATE EXAMINATION

PRIMARY SCIENCES

(100 marks)

Subject Number: P163

Thursday, 29 May

Time Allowed: 2 hours

8:30 – 10:30 am

Name of Candidate:

(Surname First)

Name of School:

Instructions

1. This paper contains 12 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 paper 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**, and **examination number** on the question paper in the spaces provided.
 - Hand in your 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	
1-40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			

Section A (40 marks)

AGRICULTURE

1. Which of the following crops grows very well in clay soil?
 - A. rice
 - B. cassava
 - C. beans
 - D. groundnuts
2. Why should a farmer add manure to a fish pond?
 - A. to improve growth of planktons
 - B. to kill fish predators
 - C. to reduce temperature of water
 - D. to feed the fish
3. Which of the following activities is a method of weeding?
 - A. thinning
 - B. supplying
 - C. banking
 - D. mulching
4. Which of the following is a deficiency sign of phosphorous in plants?
 - A. yellow leaves
 - B. poor root development
 - C. immature fruit fall
 - D. stunted growth

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

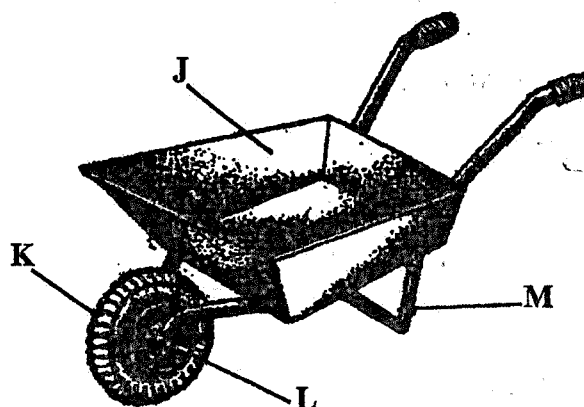


Figure 1

5. What is the name of the farm implement?
 - A. maize sheller
 - B. farm cart
 - C. shovel
 - D. wheel barrow
6. Which of the following parts would require greasing during maintenance?
 - A. J
 - B. K
 - C. L
 - D. M
7. Which of the following marketing functions helps farmers to know what they want to buy?
 - A. selling
 - B. grading
 - C. processing
 - D. advertising

Continued/...

8. Which of the following is a **minor** plant nutrient?
- A. potassium
 - B. chlorine
 - C. nitrogen
 - D. phosphorous
9. Which of the following trees can be used in an agroforestry?
- A. blue gum
 - B. gmelina
 - C. leucaena
 - D. mangoes
10. Which of the following is a characteristic of a good cock for breeding?
- A. blunt beak
 - B. strong body
 - C. wide moist vent
 - D. roomy body
11. Why is sun drying of fish important to a farmer ?
- A. to sell the fish quickly
 - B. to cook the fish easily
 - C. to share the fish easily
 - D. to improve quality of the fish
12. Which of the following factors should be considered when choosing a site for a vegetable garden?
- A. water supply
 - B. slope of the land
 - C. price of vegetables
 - D. size of the seed
13. Which of the following methods can help to control parasites of fish in a pond?
- A. drying the pond
 - B. fencing the pond
 - C. setting traps
 - D. scaring them away
14. Which of the following is a characteristic of indigenous trees?
- A. grow fast
 - B. withstand drought
 - C. have soft wood
 - D. big in size
15. Hand weeding is recommended when the weeds are
- A. very close to plants.
 - B. very far from plants.
 - C. tall.
 - D. young.
16. Which of the following methods can be used to treat fleas in chickens?
- A. using piperazine
 - B. dusting pesticides into feathers
 - C. applying petroleum jelly on legs
 - D. keeping the chicken house clean

Continued...

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)
01/01/11	Sold 100 eggs @ K20 each	2 000.00	04/01/11	Bought 2 drinkers @ K500 each	1 000.00
02/01/11	Sold 10 chickens @ K700 each	7 000.00	05/01/11	Bought 10 bags of feed @ K3 000.00 each.	30 000.00

17. What were the total sales?
- K 3 000.00
 - K 9 000.00
 - K30 000.00
 - K31 000.00
18. The farmer's loss was
- K 3 000.00.
 - K 5 000.00.
 - K22 000.00.
 - K37 000.00.
19. A system of agroforestry in which trees that are used as feed for livestock alternate with arable crops is called
- live fence.
 - improved fallow.
 - fodder banks.
 - alley cropping.
20. Hardening off in vegetable production is important in order to allow seedlings to
- resist pest and disease attack.
 - withstand hot conditions in the garden.
 - absorb water easily.
 - withstand strong winds.

SCIENCE AND TECHNOLOGY

21. A dislocated joint is a joint where
- there is clicking of bones.
 - there are torn ligaments.
 - bones are broken.
 - bones have come out of place.
22. Which organ in the body stores excess food?
- liver
 - lung
 - stomach
 - kidney

Continued/...

23. Which of the following is an indirect source of light?
- star
 - moon
 - fire
 - bulb
24. Making food palatable means
- preserving the food.
 - killing germs on the food.
 - improving taste of the food.
 - improving appearance of the food.

Figure 2 is a diagram showing a type of worms. Use it to answer Questions 25 and 26.

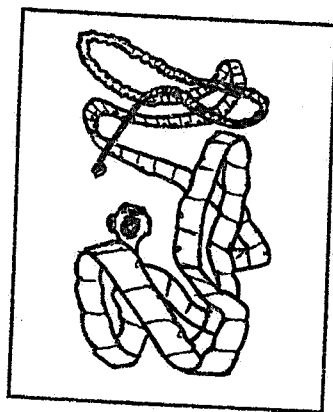


Figure 2

25. What is the name of the worm?
- roundworm
 - tapeworm
 - pinworm
 - hookworm
26. Which of the following is a symptom of infection by the worm?
- pain in the stomach
 - patient looks pale
 - diarrhoea
 - swollen belly

27. What is the function of a switch in an electric circuit of a torch?
- converts electrical energy to light
 - protects the circuit
 - controls the flow of electricity
 - produces electricity
28. Which of the following diseases **cannot** affect the breathing system of human beings?
- bronchitis
 - cancer
 - jaundice
 - asthma
29. Which of the following is a function of a jack?
- weighing objects
 - unscrewing bolts
 - lifting heavy objects
 - transferring heavy loads
30. Caustic soda is a chemical used when making
- floor polish.
 - crayons.
 - cleaning powder.
 - soap.
31. Which of the following materials is an example of synthetic fibre?
- nylon
 - cotton
 - silk
 - wool
32. Which of the following preservation technologies removes water from the food?
- canning
 - salting
 - bottling
 - freezing

Continued/...

33. Which of the following is **not** the effect of poor nutrition on the nation?
- A. decreased risk of illnesses
 - B. high mortality rate among children
 - C. low standards of living
 - D. strain on the country's economy
34. Which of the following are the **main** parts of an embryo of a bean seed?
- A. plumule and testa
 - B. plumule and radicle
 - C. testa and cotyledon
 - D. radicle and cotyledon
35. Which of the following instruments is used to detect the beating of the heart?
- A. microscope
 - B. periscope
 - C. stethoscope
 - D. telescope
36. Which of the following statements are **true** about insect pollinated flowers?
- 1. flowers are usually small
 - 2. anthers are held firmly
 - 3. have bright coloured petals
 - 4. produce large amounts of pollen
- A. 1 and 3
 - B. 1 and 4
 - C. 2 and 3
 - D. 2 and 4
37. Why should starch be added to cotton garments in laundering?
- A. to improve stiffness
 - B. to maintain size
 - C. to improve colour
 - D. to maintain shape
38. Which of the following food nutrients when included in the diet for children can prevent kwashiorkor?
- A. vitamins
 - B. proteins
 - C. carbohydrates
 - D. minerals
39. Blood should be screened before transfusion in order to
- A. kill parasites.
 - B. cool it.
 - C. prevent anaemia.
 - D. supply correct blood.
40. Which of the following plants has creeping stems?
- A. beans
 - B. maize
 - C. cow peas
 - D. sweet potatoes

Continued/...

Section B (60 marks)

AGRICULTURE

41. a. List any **three** common pests of cassava.

(3 marks)

- b. State the importance of fermentation during cassava processing.

(2 marks)

42. a. Give a reason why it is **not** recommended to apply fertilizers to groundnuts.

(2 marks)

- b. (i) Name any **three** causes of soil erosion.

(3 marks)

- (ii) Explain any **one** way in which soil erosion can lead to low agricultural production.

(2 marks)

Continued/.

43. a. Name any **two** causes of water pollution.

(2 marks)

- b. Explain any **one** effect of water pollution on agriculture.

(2 marks)

- c. Give **one** way in which farmers can achieve each of the following aims of agriculture:

- (i) increasing yield per unit area

(1 mark)

- (ii) maximizing profits

(1 mark)

44. a. Give any **three** ways of maintaining a panga knife.

(3 marks)

- b. Name any **one** advantage of using heavy machinery on a farm.

(1 mark)

Continued/...

45. a. Give any two products which can be obtained from milk.

(2 marks)

- b. What is the difference between "cross breeding" and "out breeding"?

(2 marks)

46. a. Give any two reasons why "Chilunguni" is suitable for fish farming in Malawi?

(2 marks)

- b. Why are farmers encouraged to construct medium fish ponds?

(2 marks)

SCIENCE AND TECHNOLOGY

47. a. Define "environment".

(1 mark)

Continued/...

47. (Continued)

- b. Classify the following plants into "flowering" and "non flowering" plants: beans, mangoes, fungi, tomatoes and ferns.

Flowering plants

Non flowering plants

(5 marks)

48. a. State any **two** advantages of a parallel circuit.

(2 marks)

- b. Explain any **one** danger of light energy to people.

(2 marks)

49. Figure 3 is a diagram showing a lung model. Use it to answer the questions that follow.

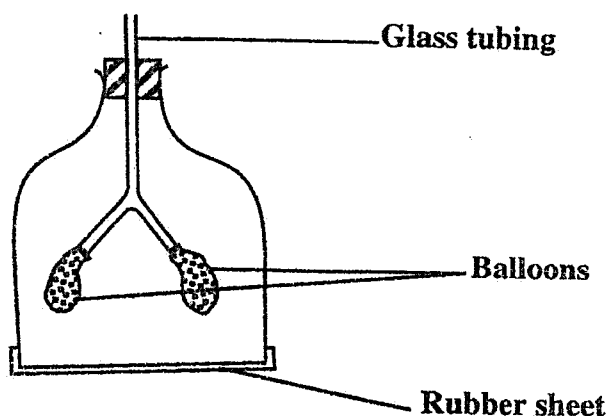


Figure 3

- a. What do the following parts represent in the respiratory system?
- (i) balloons _____ (1 mark)
- (ii) glass tubing _____ (1 mark)

Continued/...

49. (Continued)

- b. (i) What happens to the part given in a (i) when the part represented by the rubber sheet moves up?

(1 mark)

- (ii) Give a reason for the answer in question b (i).

(1 mark)

50. a. State any **two** advantages of improvised classroom technologies.

(2 marks)

- b. Explain **one** way in which freezing preserves food.

(2 marks)

51. a. Give any **three** reasons for keeping the kitchen clean.

(3 marks)

Continued/...

51. (Continued)

- b. Explain **one** way in which each of the following practices is important in kitchen hygiene:

(i) covering food

(2 marks)

(ii) opening windows

(2 marks)

52. a. Give any **two** reasons for covering food with plastic paper during steaming.

(2 marks)

- b. State any **three** good food habits.

(3 marks)

END OF QUESTION PAPER

NB: This paper contains 12 pages.

