THE PRIME EXAMINATIONS 2023

PRIMARY SIX BEGINNING OF TERM III

INTEGRATED SCIENCE

Time allocated 2 hours 15 minutes

Name:.....

Signature:.....

School:.....

District Name:.....

READ THE FOLLOWING INSTRUCTIONS CAREFULLY

1. This paper has **two** sections: **A** and **B**. Section **A** has **40** questions (**40 Marks**) and Section **B** has **15** questions. (**60 Marks**)

2. Answer **ALL** questions. All answers to both sections **A** and **B** must be written in the spaces provided.

3. **All** answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.

4. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks.**

5. Do not fill anything in the table indicated **"FOR EXAMINERS' USE ONLY"**

FOR EXAMINERS' USE ONLY

QUESTION NUMBER	MARKS ATTAINED	INITIALS
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44- 46		
47- 49		
50 - 52		
53 - 55		
TOTAL		

APPROVED:
Consultant
Integrated Science Department (PEC)

Section A. (40 Marks)

1. Name the structures found in the veins that serve a similar function as the kink in the clinical thermometer

2. Apart from Ancona, give one other breed of chicken kept for egg production.

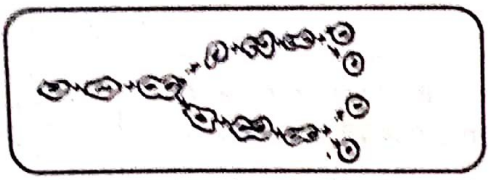
3. Why do bees visit flowers?

4. How does heat travel through solids?

5. State any one way of managing rainy weather.

6. How does paddock grazing minimize the spread of tick-borne diseases among cattle?

Study the diagram below carefully and use it to answer the questions that follow.



7. What mode of reproduction is illustrated in the diagram above?

8. *Apart from bacteria*, state one other organism that reproduces in the way as shown in the diagram above.

9. How is a **scorpion** different from other **arachnids** in terms of reproduction?

10. State the property of sound that enables bats to move at night easily.

11. Why is clay soil used in making ceramics?

12. State a reason why harvesting of honey is commonly done in the evening.

13. Name the instrument used by dairy cattle farmers to detect the presence of mastitis in milk.

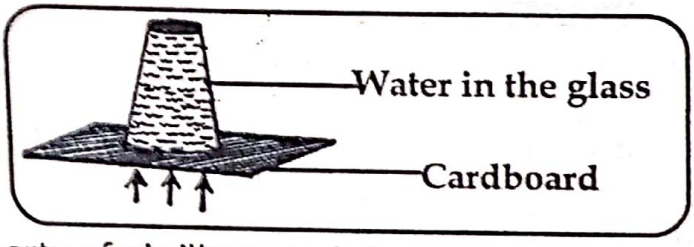
14. Which component of air is used by veterinary doctors to preserve semen?

15. How can crop farmers sustain the growth of crops during the dry season?

16. Name one example of a renewable resource.

17. Mention any one process involved in the water cycle.

The diagram below shows a property of air, use it to answer questions 18 and 19.



18. Name the property of air illustrated above.

19. State one application of the above property of air in the environment.

20. Which elements of PHC helps to control population explosion?

21. Name any one example of a useful fungus.

22. How are houseflies adapted to spreading of germs to people?

23. Name the part of the human body that works like the gills in fish.

24. Give one way how one can care for his/her teeth.

25. Why is a person suffering from hook worm infestation likely to suffer from anaemia?

26. State one way of acquiring natural immunity.

27. *Apart from the sick*, give one other example of a vulnerable group of people.

28. Give one method of preserving hides.

29. What name is given to *the fungus used in fermentation process of making alcohol?*

Study the diagram below carefully and use it to answer questions 30 and 31.

30 Name the method of separating mixtures shown above.

31 State the element of weather that favours the above activity.

32 How are **earthworms** useful to soil?

33 **As a P.6 pupil,** what first aid can you give to your classmate who has been bitten by a poisonous snake?

34 Where in the body does respiration take place?

35 State the role of red blood cells in the body.

36. Which food value do we obtain from eating legumes?

37. ***Apart from a bat,*** name <u>one</u> other animal that uses echoes in its movement.

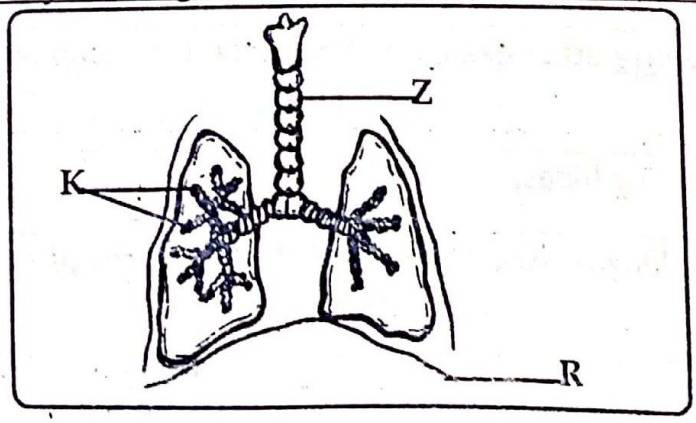
38. Name the vector that spreads bilharziasis to human beings.

39. How can sheep farmers ensure successful mating among their sheep?

40. What general name is given *to the muscles of the heart?*

Section B (60 Marks)

41. **Study the diagram below and use it to answer the questions that follow.**



(a) Which body system illustrated in the diagram above?

_____

(b) Name the parts marked **Z** and **R** from the diagram above.

(i) **Z** _____ (ii) **R** _____

(c) State any <u>one</u> adaptation of the structures **marked K** to performing their function.

_____

42 (a) Why does a doctor first shake the clinical thermometer before using it on another patient?

_____

_____

(b) Name the liquid metal used in clinical thermometers.

_____

(c) Convert 20^0C to ^0F. **(02 Marks)**

43. (a) How are prop roots useful to plants?

_____

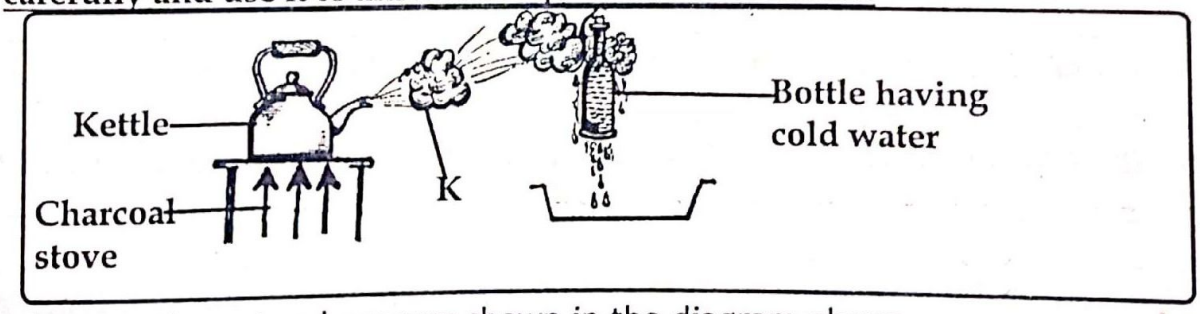
(b) At what stage do prop roots develop on a plant?

_____

(c) Write any <u>two</u> examples of plants with prop roots.

(i) _____ (ii) _____

44. **<u>The diagram below represents a natural process in the environment. Study it carefully and use it to answer the questions that follow.</u>**



(a) Name the natural process shown in the diagram above.

_____

(b) What does the following represent in the above process?

(i) The kettle _____

(ii) Charcoal stove _____

(c) Which type of weather is caused by the above process?

45. (a) Victor put a coin and a piece of paper on water in a basin and the <u>two</u> behaved differently. State what happened to;

(i) **A coin** _____

(ii) **A piece of paper** _____

(b) Name <u>one</u> other object that behaves in the same way as a piece of paper when put on water.

(c) State the method used for finding the volume of an irregular object.

46 **<u>Match the items in list A to those in list B correctly.</u>**

<u>List A</u>	<u>List B</u>
(i) Polio	**Hep B vaccine**
(ii) Measles	**BCG vaccine**
(iii) Tuberculosis	**Polio vaccine**
(iv) Hepatitis B	**Measles vaccine**

(i) Polio _____

(ii) Measles _____

(iii) Tuberculosis _____

(iv) Hepatitis B _____

47. (a) Apart from animals, give <u>two</u> examples of agents of seed dispersal.

(i) _____ (ii) _____

(b) State <u>one</u> adaptations of fruits and seeds dispersed by animal.

(c) How is seed dispersal important to plants?

48. (a) ***Apart from Friesian cattle***, give <u>two</u> other dairy breeds of cattle.

(i) _____ (ii) _____

(b) Why do farmers prefer Friesian cattle to other dairy breeds of cattle?

(c) State the functional difference between ***a strip cup*** and a ***lactometer*** as instruments used on a dairy farm.

49. (a) Give **one** example of vectors that spread diseases through bites.

_____

(b) How can the spread of malaria be prevented among people?

_____

_____

(c) Name the disease spread by each of the following vectors.

(i) Tsetse fly _____ (ii) _____

50 (a) What term is used to mean *the growing different crops on the same piece of land seasonally?*

_____

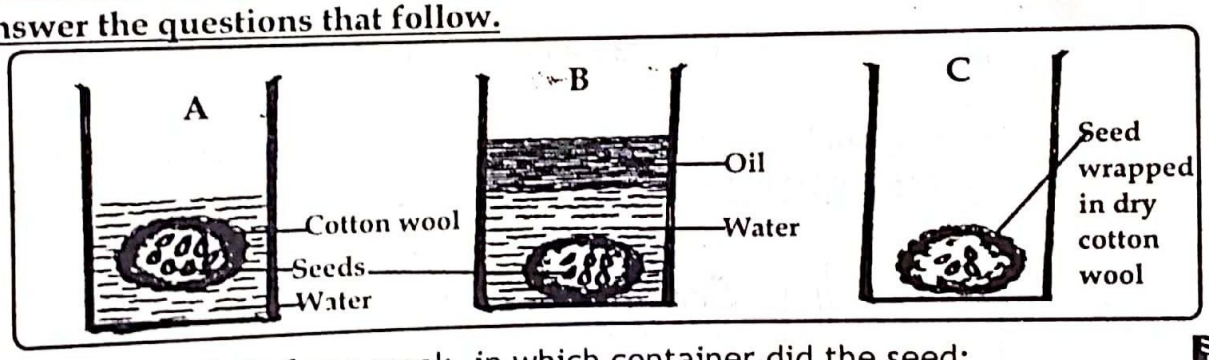
(b) *Apart from controlling pests,* state two other importance of the above practice.

(i) _____ (ii) _____

(c) How does the above practice control pests in the garden?

_____

51 **The diagram below is about germination. Study it carefully and use it to answer the questions that follow.**



(a) After a period of one week, in which container did the seed;

(i) **Germinate** _____ (ii) **Fail to germinate** _____

(b) Why did the seeds in container C behave like that?

_____

_____

(c) How is germination of seeds similar to burning of wood?

_____

_____

52. (a) Name the toxic chemical found in tobacco.

_____

(b) ***Apart from peer influence,*** state two other factors that may lead to smoking of tobacco by an individual.

(i) _____

(ii) _____

(c) How is tobacco smoking dangerous to one's health?

_____

_____

53 (a) To which group of vertebrates do we categorise?

(i) Snakes _____

(ii) Newts _____

(b) Why do snakes moult?

_____

(c) Why do some constrictors first lick the prey after killing them?

_____

_____

54 (a) Why is rainfall measured in millimetres?

_____

_____

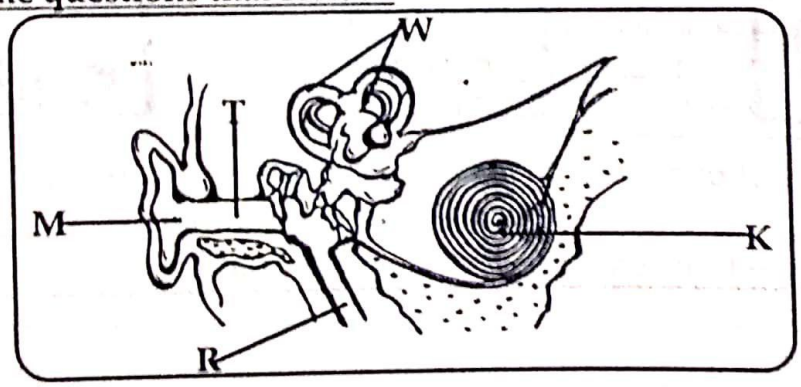
(b) *Apart from a barometer*, state <u>two</u> other examples of instruments kept in a Stevenson screen.

(i) _____ (ii) _____

(c) Which type of clouds are a direct sign of rain?

_____

55. **<u>The diagram below is of a human ear. Study it carefully and use it to answer the questions that follow.</u>**



(a) Identify the parts labelled W and K.

(i) M: _____ (ii) K: _____

(b) State the function of part marked R.

_____

(c) How is part marked M adapted to performing its functions?

_____

_____