

THE SIPRO PRE - PLE SET I 2023

INTEGRATED SCIENCE

Time Allowed: 2 Hours 15 Minutes

Index No.	Random No.	Personal No.

Candidate's Name: _____

Candidate's Signature: _____

School Random No: _____

District: _____

READ THE FOLLOWING INSTRUCTIONS CAREFULLY:

1. This paper has two sections: **A** and **B**.
2. Section **A** has **40** questions (**40** Marks).
3. Section **B** has **15** questions (**60** Marks).
4. Attempt all questions in both sections. All answers to both sections **A** and **B** must be written in the spaces provided.
5. All answers must be written in blue or black ball point pens or ink. Only diagrams and graph work must be done in pencil.
6. Unnecessary alteration of work will lead to loss of marks.
7. Any handwriting that cannot be easily read may lead to loss of marks.
8. Do not fill anything in the boxes indicated:

"FOR EXAMINER'S USE ONLY"

For Examiner's Use Only:

Qn. No	MARKS	INITIALS
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
Total		

Please turn over



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PUBLISHERS OF THE SIPRO TEACHERS' GUIDES, LEARNER'S WORKBOOKS & HOLIDAY ASSIGNMENTS

SECTION A: 40 MARKS

Questions 1 to 40 carry one mark each.

1. Name the type of bacteria that fixes nitrogen in the soil.

2. Why do the lungs expand when one breathes in?

3. How are images formed in a plane mirror different from those formed in a pinhole camera?

The diagram below is of a structure of a non-flowering plant.

Study and use it to answer questions 4 and 5.



4. Name the group of non-flowering plants with the structure labelled M.

5. How is structure marked M useful to the above mentioned group of non-flowering plants?

6. How best do livestock farmers ensure that the immunity of an inborn calf is boosted?

7. How are beetroot plants similar to carrots in terms of food storage?

8. Mention one method used to extract honey from honey combs.



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9. Name the class of vertebrates that spends its early life in water and the adult life on land.

10. In which way does soil erosion affect crop production?



11. Name the intestinal worm a person gets through eating undercooked meat.

12. Mention any **one** fungal skin disease caused by poor personal hygiene.

13. State any **one** way rearing poultry contributes to the control of kwashiorkor in infants.

14. How does slashing of tall grass control snake bites in the community?

15. Mention any **one** living source of light energy in the environment.

16. Find the density of a stone whose mass is 48g and has a volume of 12cc.

17. Why are we not advised to use soap while brushing teeth?

18. State **one** way crop farmers can ensure that seedlings get adapted to the conditions of the main garden.



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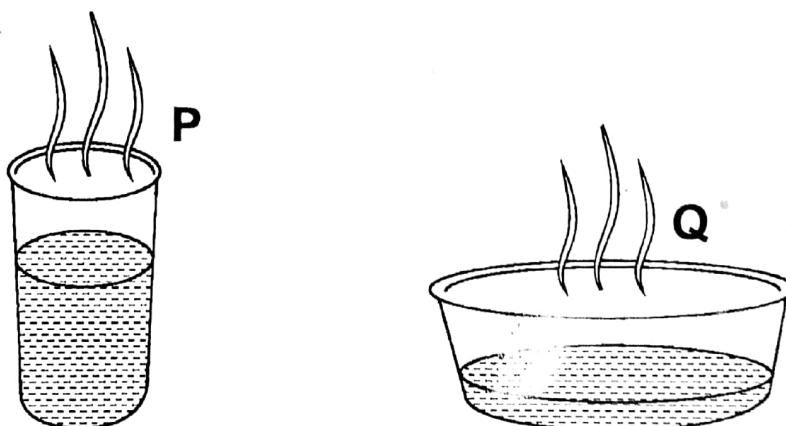
19. Why should people use biogas for cooking other than firewood?

20. How does hanging of perches in a poultry house control egg eating among poultry?

21. Name the type of electricity where charges don't flow.

22. State the behaviour of the pupil in the eye when a person is in an area with much light.

The diagram below shows two plastic containers with water of the same temperature. Study and use them to answer questions 23 and 24.



23. In which of the two plastic containers will the water cool first?

24. Give a reason to support your answer in 23 above.

25. State the reason why a person standing in a swimming pool appears to be shorter than their real height.

26. Why can't one pick chalk dust using a magnet?



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27. How is wind useful in increasing the population of plants in an area?

28. Name the group of arthropods with a hard shell, soft body and jointed legs.

29. In which way do maize plants prevent cross pollination?

30. State any **one** economic importance of plants to farmers.

31. Name the type of bee with a well developed ovipositor.



32. How is eating while talking dangerous to the respiratory system?

33. Which activity in the cleaning of clothes prevents colour stains in light coloured clothes?

34. How is regular dipping of cattle useful in the control of anaplasmosis?

35. How is the role of mercury different from that of alcohol in a six's thermometer?

36. Give **one** way a domestic fowl benefits from its spur.



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The diagram below is of a bird's beak. Study and use it to answer questions 37 and 38.



37. Name the kind of food eaten by the bird with such a beak.

38. To which group of birds does the bird with such a beak belong?

39. How does smoking prevent a fish from going bad?

40. How is trichomoniasis similar to gonorrhoea in the way they are spread among people?

SECTION B: 60 MARKS

Questions 41 to 55 carry four marks each.

41.a) Which class of food performs the following roles in the body?

i) building the body. _____

ii) protecting the body against diseases _____

b) State any one disaster that causes poor feeding among people in a family.

c) Mention any one measure taken to control poor feeding in a home.

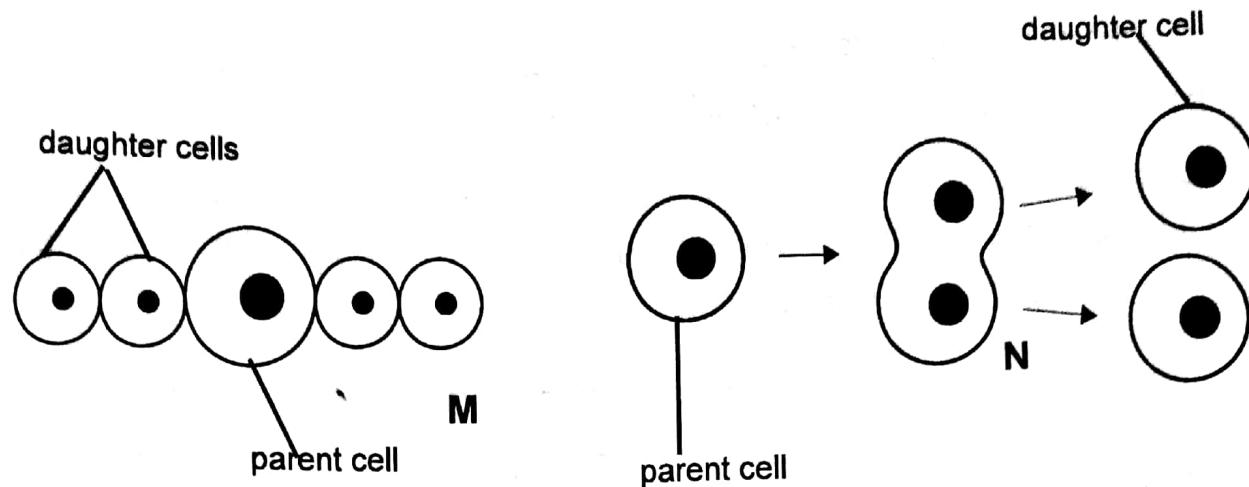


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42. The diagram below is of modes of reproduction in single celled organisms. Study and use it to answer the questions that follow.



a) Name the modes of reproduction marked with letters **M** and **N**.

i) **M** _____

ii) **N** _____

b) Name **one** example of an organism that reproduces in the way marked with letter **M**.

c) State any **one** danger of the organisms that reproduce using mode **N** in the above diagram.

43.a) Give any two ways pruning of crops promotes the production of high yields in the growing of perennial crops.

i) _____

ii) _____

b) Give any one garden tool used for pruning crops.

c) Mention any one way of controlling crop diseases without using chemicals.



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44.a) State the method of heat transfer which helps a person to;

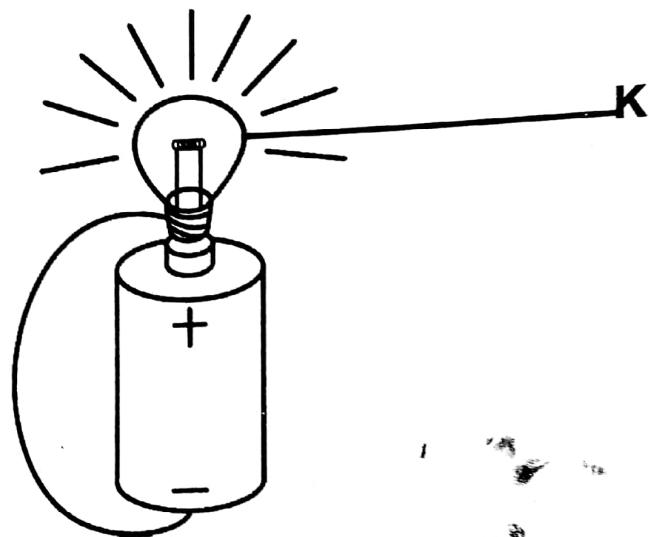
i) iron clothes _____

ii) light a charcoal stove _____

b) State the main effect of heat loss on water vapour.

c) How is the effect of hot cooking oil different from that of a hot piece of charcoal on the human skin?

45. The diagram below is of a simple electric circuit. Study and use it to answer the questions that follow.



a) Name the source of current shown in the above diagram.

b) State two energy changes that occur in part K.

i) _____

ii) _____

c) Use an arrow to show the direction of the flow of electrons in the above diagram.



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46.a) Mention any **two** signs of worm infestation in infants.

- i) _____
 - ii) _____
- b) State any **two** effects of worm infestation in infants.
- i) _____
 - ii) _____

47.a) State **one** danger of the following forms of drug misuse on the human body;

- i) overdose _____
 - ii) self medication _____
- b) Give **two** reasons why people should not buy drugs from local shops.
- i) _____
 - ii) _____

48.a) Why should a weather station have a Stevenson screen?

- b) How is a Stevenson screen adapted to reflecting most heat and proper air circulation?
- i) reflecting most heat? _____
 - ii) proper air circulation? _____
- c) How is weather forecasting useful to a crop farmer?

49.a) Name **two** excretory organs that eliminate excess water from the body.

- i) _____
 - ii) _____
- b) State any **one** way excretion is useful to the human body.



c) State the disorder of one of the excretory organs caused by eating a lot of uncooked salt.

50.a) State the importance of the following items to a person bathing;

i) bathing sponge _____

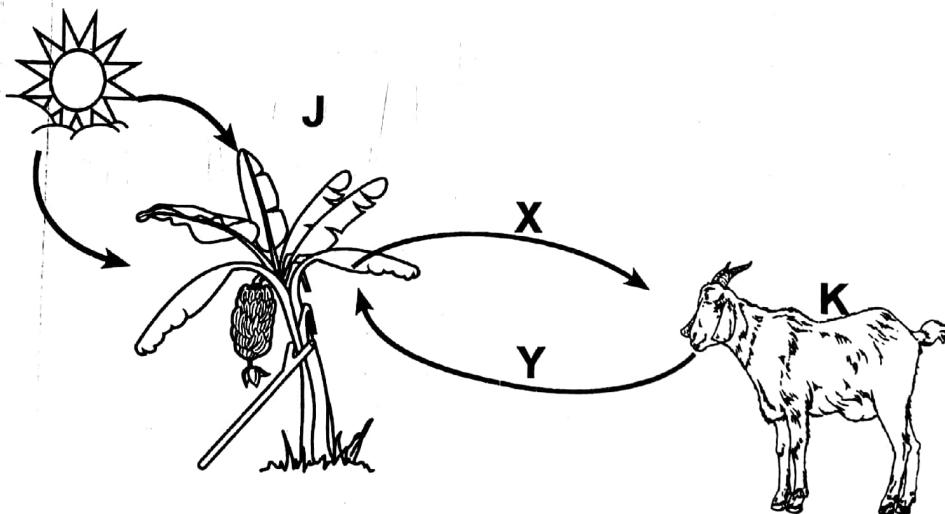
ii) soap _____

b) Give any two other activities carried out to promote personal hygiene where water is not used.

i) _____

ii) _____

51. The diagram below is of two living things that live in the same environment. Study and use it to answer the questions that follow.



a) Name the gases represented by letters X and Y.

i) X _____

ii) Y _____



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b) State two other ways organism K benefits from organism J apart from exchange of gases.

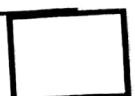
- i) _____
ii) _____

52.a) Mention any two examples of natural changes in the environment.

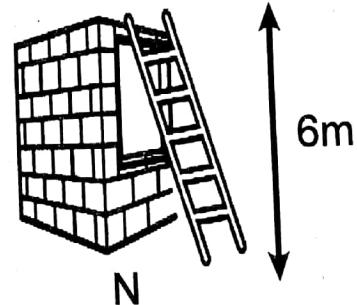
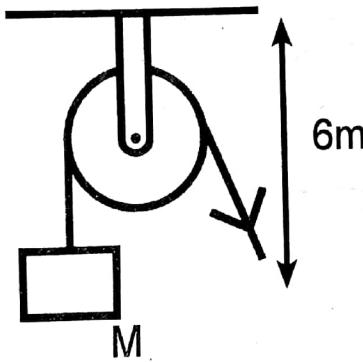
- i) _____
ii) _____

b) Give two ways of managing floods in a given area.

- i) _____
ii) _____



53. The diagrams below are of two groups of simple machines. Study and use them to answer the questions that follow.



a) Identify the type of simple machines represented in the diagrams L and M.

- i) L _____
ii) M _____

b) Which of the two simple machines would you use to raise the load over a height of 6 metres?

c) Support the given response in (b) above with a suitable reason.



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54.a) Mention any **two** artificial vegetative propagation methods.

- i) _____
 - ii) _____
- b) State any **two** advantages of vegetative propagation methods.
- i) _____
 - ii) _____

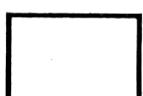
55. In the table below, part **A** shows parts of the reproductive system.

Part **B** shows the importance of the parts in the process of reproduction in their wrong order.

A: Parts	B: Importance of the parts
i) testes	produce ova.
ii) ovaries	produce sperms.
iii) oviduct	stores manufactured sperms.
iv) epididymis	It's where fertilisation takes place.

Select from the table the correct importance of the parts and write them in the space provided below.

- i) testes _____
- ii) ovaries _____
- iii) oviduct _____
- iv) epididymis _____



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