

THE SIPRO PRE-PLE SET IV 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 ID. _____

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



THE SIPRO EDUCATIONAL SERVICES LIMITED - KAMPALA

PUBLISHERS OF THE SIPRO TEACHERS' GUIDES, LEARNER'S WORKBOOKS & PUPIL'S COMPANIONS

SECTION A: 40 MARKS

Questions 1 to 40 carry **one** mark each

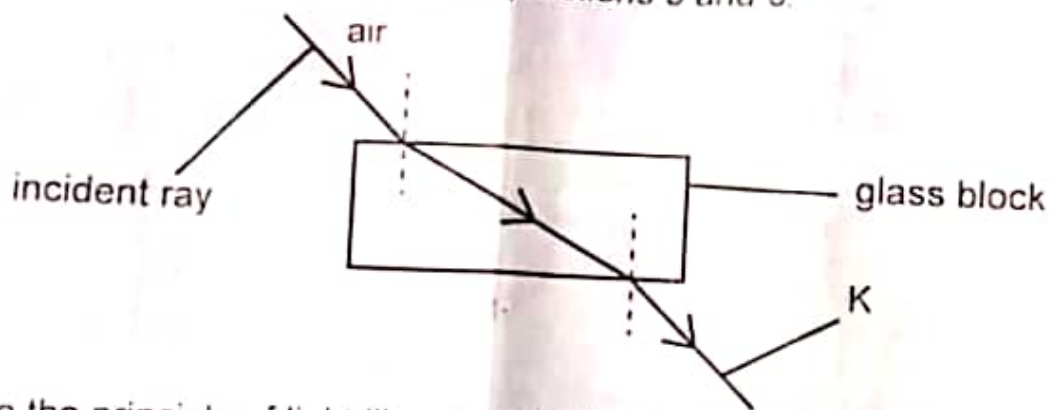
1. Mention any **one** example of a mollusc without a shell.

2. Write the duty of a worker bee in the development of the grub to become a queen.

3. How does the cold water poured on a burnt part reduce the effects of a burn?

4. By what process are clouds formed in a water cycle?

The diagram below shows a ray of light passing through a glass block from air. Use it to answer questions 5 and 6.



5. State the principle of light illustrated in the diagram above.

6. Why does ray marked with letter **K** bend away from the normal as seen in the diagram above?

7. How does bathing promote the personal hygiene of an individual?

8. Which type of change takes place when salt dissolves completely in water?



9. Name the electronic method of preserving fresh fruit.

10. Name the immunisable disease that affects the liver.



11. State the health challenge caused due to poor rubbish disposal in a community.

12. Which method of grazing cattle is commonly used by people living in congested areas?

13. Give the difference in the feeding of hookworms and tapeworms.

14. Mention any one emotional change that occurs in adolescents.

The diagram below shows a musical instrument. Study and use it to answer questions 15 and 16.



15. What should be done to the instrument above in order to produce sound?

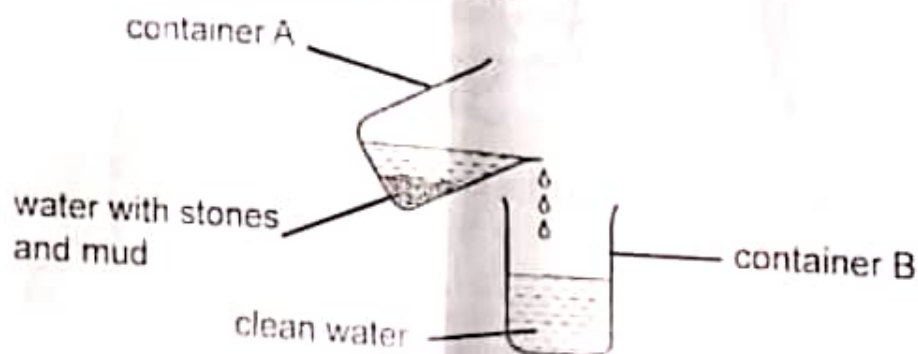
16. State the difference between the sound produced by bar marked with letter X and bar marked with letter Y.

17. How does the frequent eating of sweets contribute to poor oral health?



18. Which excretory organ regulates the sugar levels in blood?
19. Why is shearing of sheep done during the dry season?
20. Mention one factor that makes people abuse drugs
21. What results from the condition of dehydration if not given early treatment?
22. Give one advantage of using biogas for cooking.
23. Mention any one role played by the tongue during digestion.
24. Why is it a bad practice to graze very many animals on a small piece of land?

The diagram below shows a method of cleaning water. Study and use it to answer questions 25 and 26.



25. Name the method of cleaning water shown in the diagram above.
26. Why shouldn't water obtained using the above method be recommended for drinking?



27. Mention any **one** sign of ear canker in rabbits.

28. Why should the squat hole of an ordinary pit latrine be covered when it is not in use?

29. How does irrigation farming **control** inadequate food supply during prolonged drought?

30. What makes the weight of an object reduce once immersed in water?

31. Apart from carbohydrates, which other class of food is a source of energy to the body?

32. How is the Iris of the eye useful in the regulation of light entering the eye?

33. Name the part of the respiratory system that is affected by choking

34. How is pollination an important process in the maturity of flowering plants?

The diagram below shows an activity done by a crop farmer to harvest dry coffee. Study and use it to answer questions 35 and 36



35. Name the activity taking place in the diagram above.

36. What name is given to the instrument labelled with letter F?



37. How are cotton seeds dispersed from their parent plant?
38. In which part of a modern beehive does the queen bee lay its eggs?
39. How is the use of solar electricity environmentally friendly compared to that of hydroelectricity?
40. How does row planting improve yields among annual crops?

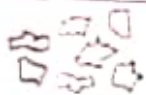
SECTION B: 60 MARKS

Questions 41 to 55 carry four marks each.

41. The diagrams below are of an experiment carried out in primary seven. Use it to answer the questions that follow.



A



B

- (a) Which type of electricity is illustrated in the diagram above?
- (b) Why does the plastic comb attract the pieces of paper as shown in diagram B?
- (c) Name the example of the electricity illustrated above in nature.
- (d) Give **one** danger of such electricity illustrated above in nature.
- 5) Mention any two ways pests can affect crops in the garden.
- 6) Write down two ways of controlling pests without using chemicals.

43(a) How are the following materials important in a deep litter house?

(i) litter _____

(ii) feeding trough _____

(b) In which two ways do poultry farmers benefit from using the deep litter system of keeping poultry?

(i) _____

(ii) _____



44(a) Apart from occupying space, state two other characteristics that make a stone be called matter.

(i) _____

(ii) _____

(b) Why can't the volume of a stone be got by calculating using the length of its sides?

(c) State the behaviour of a stone when placed in a bucket full of milk.

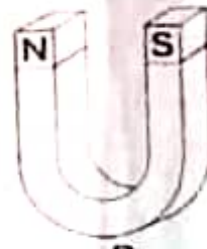
45 The diagrams below show of examples of magnets. Study and use them to answer the questions that follow.



M



N



P

(a) Name the magnets marked with letters M and P

(i) M _____

(ii) P _____

(b) How is magnet M similar to magnet N?

(c) Use arrows on magnet P to show the flow of magnetism

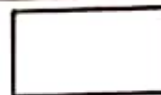


46(a) Name the garden tool used to carry out transplanting

(b) Why is the above tool the most recommended one for transplanting seedlings?

(c) Why is it important for a farmer to carry out hardening off of seedlings before transplanting them?

(d) State the most suitable time for transplanting ready seedlings.



47(a) Apart from weathering, mention **one** other way in which soil is formed.

(b) Name any **two** organisms that help in the formation of soil.

(i)

(ii)

(c) Which component of soil is formed through weathering?

48(a) Why are nimbus clouds important to crop farmers?

(b) Apart from nimbus clouds, write **any other two** types of clouds.

(i)

(ii)

(c) Apart from cloudy weather, which other type of weather makes people wear sweaters and jackets?

49(a) Give any **two** ways a child gets **natural** immunity.

(i)

(ii)

(b) Name any **one** dangerous disease that greatly damages the immunity of a person.

(c) How can such a disease in (b) above controlled from spreading?



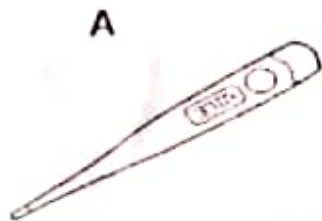
50. In the table below, **part E** shows the resources and **part F** shows their meaning in their wrong order.

E : Resources	F: Their meaning
tide	fuel gas formed through fermentation of animal wastes
biomass	rise and fall of water level in an ocean
biogas	total amount of living matter in an area
geothermal energy	heat generated from underground

Select from the table the correct meaning of the resources and write them in the space provided below

- i) tide _____
 ii) biomass _____
 iii) biogas _____
 iv) geothermal energy _____

51. The diagrams below show common equipment used by health workers. Study and use them to answer the questions that follow.



- (a) Name the instruments labelled **A** and **B**

- (i) **A** _____
 (ii) **B** _____

- (b) How are the above instruments useful to a health worker?

- (i) **A** _____
 (ii) **B** _____

- 52(a) Why is it important to give mouth-to-mouth breathing to a near drowned casualty?

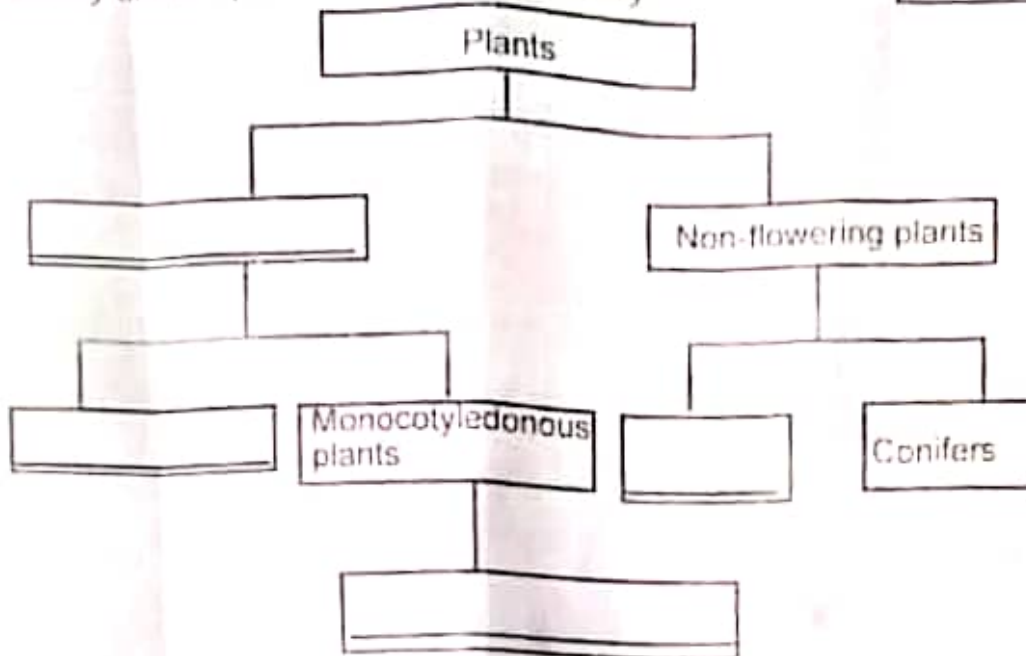
- (b) Why is a person unable to breathe after near drowning?



(c) State any two ways of reducing accidents like drowning and near drowning in our communities.

- (i) _____
(ii) _____

53 Study and complete the table below correctly



54(a) Mention any two major components of a food chain.

- (i) _____
(ii) _____

(b) Write any two ways animals depend on other animals for survival.

- (i) _____
(ii) _____

55(a) How is a hoe useful in the control of the spread of malaria?

(b) Write any two symptoms of malaria infection in an individual

- (i) _____
(ii) _____

(c) State the effect of malaria to the circulatory system



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PRE - PLE SET IV INTEGRATED SCIENCE 2021

KNOWLEDGE, SKILLS, THINKING & EXPERIENCE ACQUISITION LEARNING WITH THE ACTIVITY BOOKS, WORKBOOKS, PROJECTS & PUPILS' COMPANION



28	P.6	To prevent a bad smell from coming out of the hole/to prevent houseflies from coming out of the hole.	To let in fresh air into the hole	Reasons for leaving the hole of the ordinary pit latrine open.	Discuss the advantages of the VIP latrine over the conventional pit latrine.
29	P.4	Allows growth of crops during the dry season/prevent crops from drying up during the dry season.	Allow survival of crops.	Reason why irrigation farming is important.	Go through the proper methods of farming.
30	P.5	Due to upthrust force/upthrust force acts upon the object immersed in water.	Due to gravity.	Force in liquids that makes things weigh less.	Discuss the types of forces and their effects of weight.
31	P.4	Fats and oils/lipids	Proteins	Class of food which is a source of energy.	Group different foodstuffs and their food values.
32	P.7	The iris regulates the size of the pupil/The iris controls the amount of light entering the eye.	Prevents light from entering the eyes.	Function of the iris.	Revise through optical instruments practically in details.
33	P.6	Windpipe/trachea	Gullet/throat	Passage of air into and out of the lungs.	Emphasise on choking & correct spelling and body system it affects.
34	P.4	Pollination enables fertilization to occur/enables plants to produce fruit and seeds.	Helps plants to grow well	Importance of pollination.	Go through characteristics of wind and insect pollinated flowers.
35	P.5	Measuring coffee/weighing coffee.	Sun drying	Be specific on what is being measuring.	Guide children to give complete response.
36	P.5	clock balance/weighing scale	Weighing balance	Correct name of the instrument	Revise the instruments used to measure weight.
37	P.6	By help of wind/by wind	By air.	Dispersion in cotton seeds.	Revise seed dispersal.
38	P.5	Brood chamber/queen chamber	Honey chamber	Part of a modern beehive	Differentiate between a modern and traditional beehive.
39	P.7	Solar electricity prevents the cutting down of trees for electric poles while hydroelectricity promotes cutting down trees	Solar electricity conserves the environment.	Accept a complete comparison	Go through conservation of the environment.
40	P.4	Row planting eases weeding/ reduces competition for nutrients.	Row planting makes harvesting easy.	A way row planting improves crop yields.	Revise through the crop growing practices in a detailed way.
41	P.7 a)	Static electricity	Friction	Type of electricity caused by friction	Reinforce the learners' static electricity and lightning in particular.
	b)	The plastic comb gains opposite charges to those of the papers/ the plastic comb gains static electricity/comb gets charged with	The comb is magnetic		

15	P.6	Striking the bars/hitting the bars/beating the bars.	Vibration of the bars when struck	Mode of playing xylophones.	Go through at least 10 slides.
16	P.6	Bar X produces a high pitched sound while bar Y produces a low pitched sound.	Bar X produces little sound while Bar Y produces much sound.	Appropriate interpretation of diagrams.	Use them to discuss the
17	P.4	Remains of sweets attract bacteria in the teeth/remains of sweets attract bacteria that cause tooth decay.	Sweets attract bacteria	Dangers of eating sweets.	Thoroughly discuss disorders
18	P.7	The liver	The kidney	Body organ that regulates blood sugar.	Take the ca
19	P.5	To protect sheep from too much coldness.	To prevent warmth.	Reason for reducing sheep fur during the dry season.	Reasons for
20	P.6	Peer influence/poor social environment/coldness/stress/success/desire to be confident/desire to be brave/desire to feel mature.	To be confident/to feel mature	Factors that cause drug abuse.	Advise the ways of over
21	P.4	Death/general body weakness	Diarrhoea	Result of prolonged dehydration.	In a detail
22	P.7	Biogas does not produce smoke/biogas conserves the environment/biogas helps to keep the food neat.	Biogas is used for cooking/biogas is used for lighting.	Advantages of using biogas, but not uses of biogas.	Encourage read and p questions.
23	P.5	For tasting/rolling food into a bolus/mixing food with saliva/sending food to the gullet.	For chewing food.	Use of the tongue during digestion.	Go through
24	P.5	Leads to soil erosion/leads to leaving the land bare/exposes the soil to soil erosion agents.	Causes overgrazing	Effects of overgrazing	Discuss soil exha degradation
25	P.6/5	Decantation method/three pot method	Filtration method	Correct name	Practitioners of separat
26	P.6/5	The method above does not kill germs in water/the water may still have germs/germs escape with water.	Decantation removes mineral salts.	Contamination of decanted water.	Preparat
27	P.4	Dropping ears/wounds on the ears/pus discharge from the ears.	Painful ears	Sign of ear canker	Discuss diseases

THE SIPRO PRIMARY SEVEN INTEGRATED SCIENCE PRE-PLE SET IV MARKING GUIDE

NO	LEVEL	CORRECT RESPONSE	MARKING POINT	WRONG RESPONSE	TECHNICAL ADV
1	P.6	Slug/octopi/ squid	Garden snail	Molluscs without shells.	Go through parts their functions
2	P.5	The worker bee feeds the grub to become a queen/feeds the grub on royal jelly.	The worker bee takes care of the grub to become a queen.	Role of the worker bees in a hive.	Roles of each bee have.
3	P.6	Cold water cools the temperature around the injured part.	Cold water heals the wound	Roles of cold water in reduction of temperature.	First aid for different accidents.
4	P.3	Condensation process	Evaporation process/ condensation	Correct spelling	Help the learners to process in details.
5	P.7	Refraction/light can be refracted.	Light can be reflected.	Correct spelling	Help candidates find between reflection and refraction.
6	P.3	Ray X is moving from a denser medium to a less dense medium.	Due to refraction	Reason for the behaviour of the ray.	Revision of reflection and refraction.
7	P.6	Bathing prevents a bad body smell/removes dirt from the body/kills germs on the body.	Make the body clean	Importance of bathing	Go through the dangers of poor hygiene.
8	P.5	Physical changes	Chemical change.	A reversible change	Discuss the types of changes and their characteristics.
9	P.4	Refrigeration/putting in freezer/putting in the fridge.	Use of the fruits	Process of making fruit	Discuss the methods of food preservation.
10	P.5/7	Hepatitis B	Cirrhosis	Immunisable disease of the liver	Go through immunisation in a detailed way.
11	P.4	Outbreak of diarrhoeal diseases/easy spread of diarrhoeal diseases/increased number of houseflies in the community.	Bad body smell	Response should be a health challenge.	Revise the diseases spread and sanitation.
12	P.5	Zero grazing	Paddock grazing	Method of grazing cattle in a confined area.	Visit a nearby ranch and observe methods of keeping cattle.
13	P.4	Hookworms feed on blood while tapeworms feed on digested food.	They feed on decaying matter.	Difference in feeding of tapeworms and hookworms	Help candidates know the differences of structures of worms.
14	P.6	The adolescent easily gets annoyed/interest in the opposite sex/the adolescents want to be recognized as mature/the adolescents want to be given freedom.	Development of breasts.	Emotional changes in adolescents	Differentiate the types of changes that take place in adolescents.

c)		Lightning	Lightening	Correct spelling
d)		Strikes people/animals to death /destroys people's property/ causes electric fire outbreaks.	Fixes nitrates in the soil.	Dangers of lightning.
42	P.4 a)	They cause wilting/eat the leaves/make holes in the fruit/weaken the stem/spread diseases to the crop/reduce the crop yields/case stunted growth.	Pests damage crops.	Effects of pests on crops.
	b)	Fencing the garden/uprooting affected crops/regular weeding /pruning/early planting/ practising crop rotation	Spraying using pesticides.	Reject the use of pesticides.
43	P.7 a)	i) Prevents the breaking of eggs/ prevents dampness in the poultry house/makes cleaning of the poultry house easy/ absorbs poultry droppings. ii) For putting mash/for putting feeds/protects poultry feeds from getting spoilt.	i) Keeps the poultry house clean. ii) It is eaten by birds.	Importance of poultry litter and feeding trough
	b)	Egg collection is easy/ Birds are safe from predators/ Birds are safe from harsh weather/Many birds are kept in a small space.	It is good to rear poultry.	Advantages of the deep litter system.
44	P.5 a)	A stone has weight/a stone exerts pressure.	A stone occupies space/has volume.	Another characteristic of matter
	b)	A stone has an irregular shape/ a stone has an improper shape.	A stone has a proper shape.	Characteristics of irregular objects.
	c)	A stone sinks in water/a stone moves to the bottom of the water.	A stone floats.	Sinking objects.
45	P.7 a)	M – lodestone /magnetite P – U-shaped magnet/horse shoe magnet	M – earth P – bar magnet	Correct names.
	b)	Both are natural magnets/both exist on their own.	Both attract magnetic materials.	Similarity of lodestone and the earth.

46	c)				
P.3 a)		Trowel/garden trowel	A hoe	Direction of flow of magnetism.	
b)		Prevents damage to the roots/ has a large surface to prevent damaging of the root system.	Is big	Garden tool for harvesting.	Use the school garden to throw more light on different crop growing activities.
c)		To expose seedlings to conditions of the main garden	To make seedling grow well.	Prevention of root damage.	
d)		Evening time	Morning time	Exposure of seedling.	
47	P.5/3a)	Decomposition	Rotting	Soil's life time for transplanting.	
b)		Bacteria/fungi/termites/earthworms	Water/insects	Method of soil formation that involves bacteria	Organize revision questions on soil exhaustively.
c)		Rock particles		Decomposers	
48	P.4 a)	Nimbus clouds provide rain water to farmer's crops.	Humus	Correct component.	
b)		Cirrus clouds/stratus clouds/cumulus clouds	Nimbus clouds provide rainfall	Importance of nimbus clouds	Revisit P.4 work on weather in a detailed way.
c)		Rainy weather	Cirrus clouds	Correct spelling.	
49	P.6 a)	Through breastfeeding/through recovering from an infection/ from the mother to the unborn baby through the placenta.	Sunny weather	Weather that causes coldness.	Discuss common diseases with their control.
b)		HIV/AIDS/flu/Covid-19/blood cancer	Through immunisation.	Acquisition of natural immunity.	
c)		Through abstaining from sex/wearing masks when having flu.	Malaria	Diseases that affect.	
50	P.7a)	i) Rise and fall of water level in an ocean. ii) Total amount of living matter in an area. iii) Fuel gas formed through the fermentation of animal wastes. iv) Heat generated from the ground.	Through drinking boiled water.	Control of circulatory diseases.	Guide candidates on the proper approach for questions and matching.
			Any interchange.	Correct matching.	