

# THE SIPRO PRE-PLE SET II 2024

## INTEGRATED SCIENCE

Time Allowed: 2 Hours 15 Minutes

EMIS No.						Personal No.		
Index No.								

Candidate's Name: \_\_\_\_\_

Candidate's Signature: \_\_\_\_\_

EMIS 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



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## SECTION A: 40 MARKS

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

1. Name the vector that spreads sleeping sickness among people.

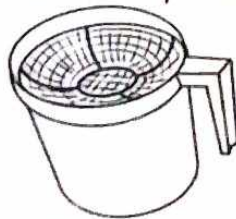
2. How does mulching control weeds in the garden?

3. Give a reason why crop farmers should carry out weather forecasting.

4. State **one** way of administering first aid to a fractured victim.

5. Give any **one** reason why an earthworm dies when oil is poured on its body.

The diagram below shows a common equipment used on a cattle farm. Study and use it to answer questions 6 and 7.



6. Identify the above equipment used by cattle farmers.

7. How is the above equipment adapted to its function?

8. Name any **one** nitrogenous compound found in urine.

9. Mention any **one** similarity between the body structure of an insect and that of an arachnid.

10. Name the type of pit latrine which requires a lid on its squat hole.



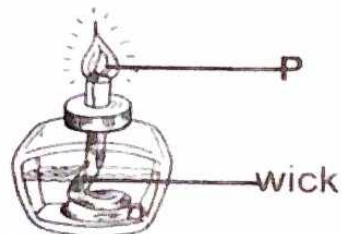
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**P.7 PRE-PLE SET II INTEGRATED SCIENCE 2024**

IGNITE CRITICAL THINKING AND EXPERIENCE ACTUAL LEARNING WITH THE ACTIVITY BOOKS, SEMAIO, TEACHER'S GUIDES & PUPIL'S COMPANIONS

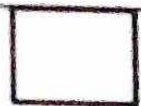


11. State the main cause of constipation in human beings.  
\_\_\_\_\_
12. Mention any **one** lifeskill that can safeguard the youth against drug abuse.  
\_\_\_\_\_
13. Give **one** reason why cooking pans have handles made of insulators.  
\_\_\_\_\_
14. State the importance of soaking clothes before washing them.  
\_\_\_\_\_
15. Write any **one** danger of swamp drainage.  
\_\_\_\_\_
16. Mention the intestinal worm that causes itching around the anus at night.  
\_\_\_\_\_

The diagram below shows a burning candle. Study and use it to answer questions 17 and 18.



17. Give **one** form of energy found at part marked with letter P.  
\_\_\_\_\_
18. What type of change takes place when the wick of the candle burns?  
\_\_\_\_\_
19. State any **one** way domestic animals increase chances of spreading diseases at home.  
\_\_\_\_\_
20. Why is the rate of transpiration in banana plants higher than that in a bean plant?  
\_\_\_\_\_  
\_\_\_\_\_
21. Give any **one** characterisitic of images formed in a periscope.  
\_\_\_\_\_
22. Mention any **one** product obtained from practising apiculture.  
\_\_\_\_\_



23. Give any **one** way of promoting food security in a home.

24. State any **one** way of increasing the efficiency of wedges as simple machines.

25. Why should a COVID-19 victim be isolated from healthy people?

26. How do plants benefit from bees visiting them?

27. State the method of planting which controls wastage of seeds.

28. Mention any **one** vaccine administered to babies at birth.

29. What will happen to the pitch of a guitar if its strings are tightened?

30. In which one way can a school health committee solve the problem of a bad smell in a latrine?

31. State any **one** way pulleys can be useful in a school.

32. Apart from free range system, give any other method of rearing poultry in Uganda.

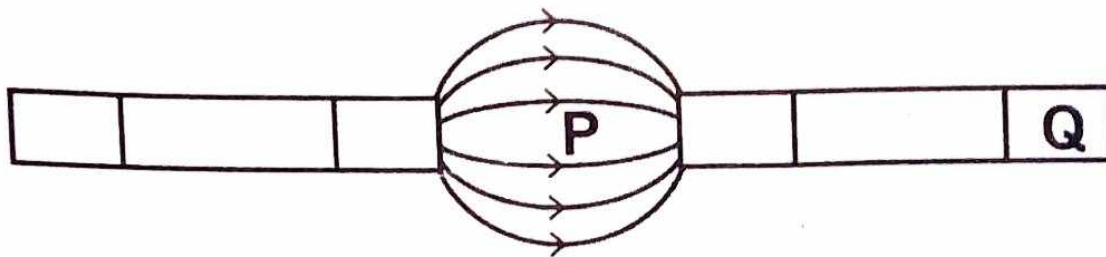
33. State the behaviour of a piece of paper when placed in a basin full of water.

34. Name the fungus which grows on bread that has overstayed.





The diagram below shows two bar magnets. Study and use it to answer questions 35 and 36.



35. Identify the pole marked with letter Q.

\_\_\_\_\_

36. Name the force which exists at point marked P.

\_\_\_\_\_

37. Name the bone which joins the elbow to the shoulders.

\_\_\_\_\_

38. How important is pricking out to crop farmers?

\_\_\_\_\_

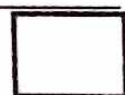
39. Why should the floor of a goat shed be made with a slanting surface?

\_\_\_\_\_

40. Why do health workers screen blood before transfusion?

\_\_\_\_\_

### SECTION B: 60 MARKS



Questions 41 to 55 carry four marks each.

41. a) State any **two** examples of chemical changes which can occur in a school kitchen.

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

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

b) Give any **two** ways chemical changes are important to people in the environment.

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

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



42. The table below shows childhood immunisable diseases, vaccines and the body site of administration. Complete it correctly.

Disease	Vaccine	Site of administration
Tuberculosis	i) _____	Right upper arm
ii) _____	Polio vaccine	Mouth
Measles	Measles vaccine	iii) _____
Hepatitis	iv) _____	Left upper thigh

43. a) Which type of soil has the following characteristics?

i) lowest drainage \_\_\_\_\_

ii) lowest capillarity \_\_\_\_\_

b) How are fungi useful during soil formation?

c) State the reason why materials are changed from one kit to another when making compost manure.

44. a) State any **two** ways you can care for vulnerable people in your community.

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

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

b) Give the meaning of the following terms;

i) invalid \_\_\_\_\_

ii) convalescent \_\_\_\_\_





45. The diagram below shows an activity commonly done by crop farmers in rural areas. Study and use it to answer the questions that follow.



a) Identify the method of separating mixtures shown in the diagram above.

b) Give any **two** examples of mixtures that can be separated using the above method.

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

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

c) State the importance of wind in the above method.

46. a) Write any **two** primary sex characteristics in both male and female adolescents.

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

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

b) Why are adolescents advised to bathe regularly?

c) State any **one** danger of teenage pregnancies to adolescents.

47. a) Why does the level of water fall when an object immersed in water is removed?

\_\_\_\_\_

b) Give any **one** object whose volume can be obtained by getting the product of the base area and its height.

\_\_\_\_\_



- c) Calculate the volume of an object whose mass is 40g and density is 8g/cc. (2 marks)

48. a) Mention any **two** examples of chicken reared mainly for meat production.

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

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

b) Write any **two** poultry management practices that reduce vices among poultry

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

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

49. The table below shows different organisms. Study and use it to answer the questions that follow.

O	P	Q	R
centipede	tick	lobster	locust

a) Identify the group of invertebrates to which all the above organisms belong.

\_\_\_\_\_

b) Mention **one** other organism that can be grouped with;

i) animal O \_\_\_\_\_

ii) animal P \_\_\_\_\_

c) How is organism marked O similar to organism marked R in the way they breathe?

\_\_\_\_\_





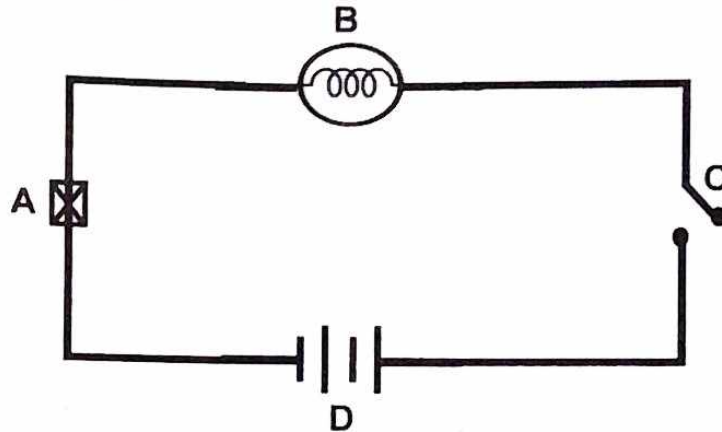
50. a) Mention any **two** factors considered when choosing trees to plant in Agroforestry.

i) \_\_\_\_\_  
ii) \_\_\_\_\_

b) State any **two** advantages of practising agroforestry to a crop farmer.

i) \_\_\_\_\_  
ii) \_\_\_\_\_

51. The diagram below shows an electric circuit. Study and use it to answer the questions that follow.



a) Identify the parts of an electric circuit labelled with letters A and C.

i) A \_\_\_\_\_  
ii) C \_\_\_\_\_

b) Give the importance of the part labelled D in the electric circuit above.

c) State any **one** energy change that can take place at part B when C is closed.

52. a) Write any **two** dangers of living in a dusty environment.

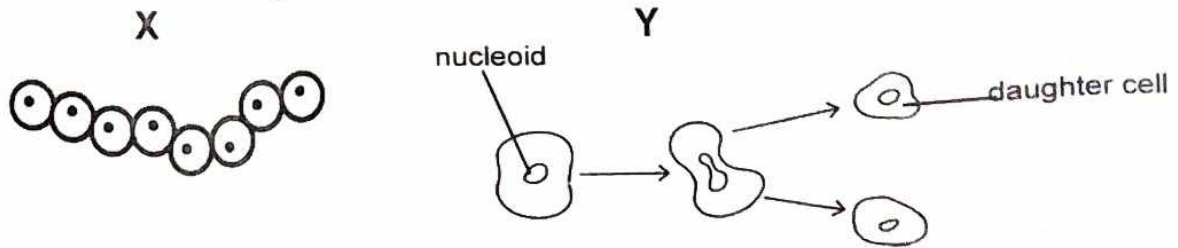
i) \_\_\_\_\_  
ii) \_\_\_\_\_

b) Mention any **two** activities people can do to reduce dust in the environment.

i) \_\_\_\_\_  
ii) \_\_\_\_\_



53. The diagrams below are of two modes of reproduction. Study and use them to answer the questions that follow.



a) Name the modes of reproduction marked with letters X and Y.

i) X \_\_\_\_\_

ii) Y \_\_\_\_\_

b) Name **one** organism that reproduces using the reproduction mode labelled Y.

c) Which method of making alcohol involves the action of organism that reproduces by mode labelled X?

d) How is reproduction an important process in organisms?

54. a) Name the breeding place for a blackfly.

b) Mention the disease spread by blackflies to people.

c) Give **two** ways in which the spread of the disease mentioned in (b) above can be controlled.

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

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

55. Table A shows garden tools and table B shows their uses in a wrong order.

A: Garden tools	B: Uses
garden fork	transplants seedlings
sickle	mixes and turns manure.
trowel	helps in spacing seedlings.
measuring tape	harvests cereals

Select from the above, the correct uses of the garden tools and write them in the spaces provided:

- i) garden fork \_\_\_\_\_
- ii) sickle \_\_\_\_\_
- iii) trowel \_\_\_\_\_
- iv) measuring tape \_\_\_\_\_



# THE SIPRO PRE-PLE INTEGRATED SCIENCE SET II MARKING GUIDE - 2024

CLASS LEVEL	CORRECT RESPONSE	WRONG RESPONSE	MARKING POINT	TECHNICAL ADVICE
10				
1	P.3	Tsetse fly	Black fly	Should be tsetse fly.
2	P.4	Mulches prevent weeds from getting sunlight / Mulches block weeds from getting sunlight.	Weeds are not in the garden.	Should be cutting off the supply of sunlight.
3	P.4	To plan for farm activities / To know when to plant and harvest.	To know the farm activities.	Should be planning for the farm.
4	P.2/P.4	Tying splints around the fractured part / Carrying a person on a stretcher.	To reduce pain.	Should be tying a splint around the fractured part.
5	P.6	Oil blocks its breathing organ which is the moist skin / The earthworm stops breathing since the moist skin is blocked by oil.	Oil burns the earthworm.	Should be blocking the breathing organ.
6	P.6	Strip cup	Lactometer	Should be strip cup.
7	P.6	It has a wire mesh for filtering blood clots and pus in milk.	It has a wire mesh.	Complete adaptation with a function.
8	P.7	Uric acid / Excess mineral salts / Urea	Bile pigments	Should be a component of urine.
9	P.6	Both have segmented bodies / Both have jointed legs / Both lack a backbone./ Both have an exo skeleton.	Both have three main body organs.	Should be a characteristic of arthropods.
10	P.6	Ordinary / Conventional pit latrine	Ventilated Improved Pit latrine.	Should be ordinary / Conventional pit latrine.
11	P.5	Lack of roughages in one's diet.	Is the difficulty in defaecation.	Should be a cause of constipation.
12	P.6	Being assertive / Critical thinking / Good decision making / Self-awareness / Effective communication / Focus and self-control / Self-confidence / Coping with stress / Creative thinking / Problem solving.	Feeding on a balanced diet / Doing regular body physical exercises.	Should be a life skill not a life style.
13	P.5	To prevent the user's hand from being burnt.	They are poor conductors of heat.	Should be importance of using poor conductors of heat.



14	P.6	It dissolves stains / It softens clothes for easy washing / Loosens dirt in the clothes.	It is a good practice.	Should be how good it is to soak clothes before washing.	Take them through the steps involved in cleaning clothes and their importance.
15	P.3	It leads to reduced rainfall / Leads to floods / Leads to displacement of aquatic animals.	It leads to soil erosion.	Specify the dangers of destroying swamps.	Guide them through reasons why people have drained swamps.
16	P.4	Pinworms	Hookworm / Tapeworms	Should be pinworms.	Take learners through intestinal worms.
17	P.5	Heat energy / Light energy	Heat energy changes to light energy / Chemical energy changes to heat energy.	Should be a form of energy change.	Guide them through forms of energy and energy changes.
18	P.5	Chemical change	Physical change	Should be chemical change.	Take candidates through the different changes in the environment.
19	P.4	Domestic animals have fur in which vectors that spread germs hide / Domestic animals are hiding places for vectors.	Domestic animals destroy property at home.	Should be a way domestic animals increase chances of spreading germs that cause diseases.	Guide them through ways domestic animals increase chances of spreading diseases.
20	P.4	A banana plant has bigger leaves to carry out transpiration at a high rate while a bean plant has small leaves that reduce transpiration rate.	They have big leaves.	Correct and complete comparison.	Take candidates through factors that affect the rate of transpiration.
21	P.7	The images are upright / Laterally inverted / Images are of the same size as the object / Images are virtual / Image distance from the mirror is the same as object distance from the mirror.	The images are real, inverted and diminished.	Should be a characteristic of images formed in plane mirrors.	Guide them through types of mirrors and types of curved mirrors.
22	P.5	Honey / Propolis / Bee pollen / Beeswax / Bee venom	Nectar	Should be a product got from bees.	Take candidates through bees and their products.
23	P.4	Planting disease resistant species of crops / Early planting of crops / Storing food in food stores / Preserving food / Planting perennial crops.	Laziness / Poverty	Should be a way of promoting food security.	Guide them through ways of promoting food security and causes of food insecurity.
24	P.7	Sharpening them / Cleaning them after use / Oiling the moving parts before use / Painting them.	Increasing the angle of inclination.	Should be improving the efficiency of wedges.	Guide pupils through improving the efficiency of all simple machines.
25	P.3	It prevents contact of the sick person with healthy ones / Prevents easy spread of COVID-19.	It is a good thing.	Should be how isolation prevents spread of diseases among people.	Take learners through control measures of animal diseases.



26	P.4	Flowers of plants get pollinated / Bees pollinate flowers.	They get nectar.	Should be plants to benefit.	Guide them through benefits of plants from bee visits.
27	P.4	Row planting method	Broadcasting / Casting method	Should be a method of planting which controls wastage of seeds.	Take learners through methods of planting seeds.
28	P.5	Polio vaccine / BCG vaccine	DPT vaccine	Should be a vaccine given to babies at birth.	Guide learners through different ages and the vaccine.
29	P.6	It will increase / It will be high.	It would reduce.	Should be high.	Guide them through increasing and reducing pitch by different musical instruments.
30	P.5	By smoking the latrine / By scrubbing the floor / By putting naphthalene balls.	They clean the latrines.	Should be a way to chase houseflies and reducing the bad smell.	Take candidates through ways of controlling bad smell in pit latrines.
31	P.7	They are used to hoist flags on flag masts / Raising building materials / Towing broken down vehicles (school vans).	They are useful.	Specify how useful they are.	Guide them through the uses of pulleys at school.
32	P.5	Deep litter system / Battery system / Cage system / Pen system / Fold / Ark system.	Tethering method	Should be a method of rearing poultry.	Guide candidates through the methods of rearing poultry.
33	P.5	It will float / It floats / It will remain on top.	It will sink.	Should be floating.	Take them through sinking and floating.
34	P.5	Mould / Mucor	Mushroom	Should be mould.	Guide candidates through effects of each fungus.
35	P.7	Q - North Pole	South pole / N- Pole	Should be North pole	Guide learners on movement of magnetic lines of force.
36	P.7	Magnetism / Magnetic force	Force of repulsion	Should be attraction.	Take candidates through magnetic poles.
37	P.7	Humerus	Femur	Should be humerus.	Guide them through names of different bones.
38	P.4	Creates enough space among seedlings / Prevents competition for sunlight / For carbon dioxide / sunlight and soil / Controls easy spread of crop diseases.	It is good to crop farmers.	The importance of pruning out.	Guide learners through crop growing activities.



39	P.5	To allow easy flow of urine and goat droppings.	To be clean.	Easy flow of droppings and urine.	Guide them through care given to domestic animals.
40	P.6	To prevent easy spread of blood-related diseases like HIV / AIDS Infection.	To get clean blood.	Should be control of the spread of infectious diseases.	Take candidates through blood screening.
<b>SECTION: B</b>					
41	P.5	a) Rusting / Fermentation / Respiration/Burning/ Decomposition b) They help in making charcoal / Help in making alcohol / They enable them to get food/ Help in soil formation.	Freezing / Evaporation / Condensation They change the properties.	Should be a change that forms new substances. They should be of importance of chemical changes.	-Guide candidates through changes that take place in the environment. -Take them through the importance of the different changes that take place in the environment.
42	P.5	i) BCG vaccine ii) Polio iii) Left upper arm iv) Hep B vaccine	Polio injection / Right upper arm/ BCG vaccine	Interchanged concepts	Guide them through not interchanging concepts.
43	P.5	a) (i) Clay soil (ii) Sand soil b) They decompose organic matter to form humus / Form humus. c) Qn 43c) (one pit to another) To allow proper decomposition of materials.	Sand soil / Loam soil They grow in soil. To allow more humus.	Should be types of soil. Importance of fungi in the soil. It should be correct reason for changing.	-Take learners through types of soil and soil layers. -Guide them through steps followed when making composite manure.
44	P.5	a) Feeding them on a balanced diet/ Washing for them clothes / Cooking for them / Feeding them. b) (i) Invalid is a person who has been weakened by a disease/ Is a person with prolonged illness / A person who is very sick. (ii) A convalescent is a person recovering from an illness.	Giving them alcohol to drink. Is a person recovering from illness. Is a person who has been weakened by sickness.	Should be a good way of caring for vulnerable people. Should be a person weakened by disease. Should be a person who is recovering from an illness.	-Take learners through care for vulnerable people. -Guide them through invalids and convalescents.
45	P.5	a) Winnowing b) Millet mixed with husks / Sorghum / Rice / Beans with husks / Soya with husks / Beans with husks / Peas with husks c) Wind blows away the husks from seeds.	Grinding Tomato seeds Wind helps in winnowing. Sweat glands become active.	Should be winnowing. Should be a mixture of husks and seeds that can be separated using winnowing. Should be the exact way wind helps in winnowing. Similar primary sex characteristics.	-Guide candidates through activities done using wind. -Take learners through examples of seeds separated by winnowing. -Guide them through energy resources and their uses.
46	P.6	a) Production of hormones / Production of gametes (reproductive cells).			-Guide candidates through difference between puberty and adolescence.



47	P.5	<p>b) To prevent bad body smell or odour / To help in controlling skin diseases.</p> <p>c) It can lead to school drop outs / It can lead to death during birth / Leads to self-neglect.</p> <p>a) To take up the volume that was being occupied by the object.</p> <p>b) A brick / Cylinder / A rectangular box / Cuboid / Cube</p> <p>c) Volume = Mass Density</p> $V = \frac{40g}{8g/cc}$ $V = 5cc$	<p>To look attractive.</p> <p>It can lead to STDs.</p> <p>Water is less dense than that object.</p> <p>Stone / Broken bottle</p> $V = \text{Mass} \times \text{Density}$ $V = 40g \times 8g/cc$ $V = 320cc$	<p>Should be scientific reason.</p> <p>It is about pregnancy.</p> <p>Should be to take up the space that was occupied by the object.</p> <p>Should be an object with a proper shape.</p> <p>Follow the steps and use the correct formula.</p>	<p>-Guide them through menstruation and ovulation.</p> <p>-Take them through challenges of adolescents.</p> <p>-Take them through dangers of teenage pregnancy to adolescents.</p> <p>-Take learners through displacement.</p> <p>-Guide them through objects that are irregular.</p> <p>-Guide them through calculation and formulae.</p>
48	P.5	<p>a) Light Sussex / Sykes / Cornish White / Jersey giant / Orpington / Plymouth Rock</p> <p>b) Debeaking / Putting few birds in a poultry house / Putting laying boxes in dark corners / Hanging green vegetables</p>	<p>Ancona / Minorca / Brown egg</p> <p>Regular vaccination / Culling</p>	<p>Should be chicken kept for meat production.</p> <p>Control of vices among the poultry.</p>	<p>-Guide pupils through keeping poultry.</p> <p>-Take them through poultry management practices.</p>
49	P.6	<p>a) Arthropods</p> <p>b) (i) Millipede (ii) Mite / Scorpion / Spider</p> <p>c) Both breathe through spiracles.</p>	<p>Arachnids</p> <p>(i) Housefly (ii) Millepede</p> <p>Both breathe through book lungs.</p> <p>Height of the tree.</p>	<p>Correct identification</p> <p>Should be a similarity in the way they breathe.</p> <p>Should be factors that enable choice for a tree breed.</p> <p>How a crop farmer benefits from the planting.</p>	<p>-Guide candidates through invertebrates.</p> <p>-Guide them through examples of arthropods.</p> <p>-Take them through breathing of arthropods.</p> <p>-Guide learners through agro-forestry.</p> <p>-More guidance about crop rotation.</p>
50	P.7	<p>a) Maturity rate / Resistance to pests / Resistance to harsh weather and poor soils / Type of wood obtained.</p> <p>b) A crop farmer gets double income / Allows maximum usage of land.</p>	<p>Trees control soil erosion / Trees provide fruits to people.</p>		



51	P.7	a) (i) A - fuse (ii) C - switch b) To produce electricity / To provide electric current. c) Electrical energy changes to heat energy / Heat energy changes to light energy.	Switch Fuse To break the circuit at one's will. Heat energy / Light energy Makes the environment dirty.	Interchanged concepts. Should be role of dry cells. Should be energy change not form of energy. Effects of living in a dusty environment. Reducing dust in the environment.	-Should avoid interchanging concepts. -Guide learners through parts of an electric circuit. -Guide them through forms and changes of energy.
52	P.4	a) It leads to food contamination / Leads to lung diseases / Leads to jiggers. b) Regular watering of the environment / Cementing the environment / Planting trees / Covering the floor with cow dung.	Removing dust / Dusting the furniture.	Correct modes of reproduction. Organisms that reproduce by cell division. Correct name of process. Increase in number.	-Guide candidates through a health survey. -Revise ways of living in a healthy environment and the steps involved therein.
53	P.5	(i) X - Budding (ii) Y - Cell division / binary fission b) Bacterium / Amoeba / Paramencium c) Fermentation d) Reproduction helps organisms to multiply in number.	(i) spores (ii) budding Fungi Evaporation It helps plants to grow.	Should be fast flowing water. Should be River blindness. Should be a control measure for the spread of river blindness.	-Guide learners through types of reproduction and the modes of reproduction as well.
54	P.3/P.4	a) Fast flowing water b) River blindness / Onchocerciasis c) By spraying black flies with insecticides / By regular washing of the eyes / Avoid sharing face towels.	Water bodies Night blindness By wearing a face mask.	Correct uses of given garden tools.	-Guide learners through the different breeding places for most vectors. -Take them through the breeding places for the different vectors. -Guide them through vectors and the diseases they spread.
55	P.3	i) Turn s manure. ii) Har vests cereals. iii) Transplants seedlings. iv) Measures length of the garden.	i) Transplants seedlings ii) Digs rocky areas iii) Harvests cereals iv) Turns manure		Revise using question approach about the garden tools. You can also use the school garden for a practical approach.