

THE SIPRO P.7 MOCK 2024

INTEGRATED SCIENCE

Time Allowed: 2 Hours 15 Minutes

11

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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SECTION A: 40 MARKS

Questions 1 to 40 carry one mark each.

1. Name the method of separating mixtures which involves the use of a sieve and a filter funnel.

2. State any **one** reason why a ship sinks in water.

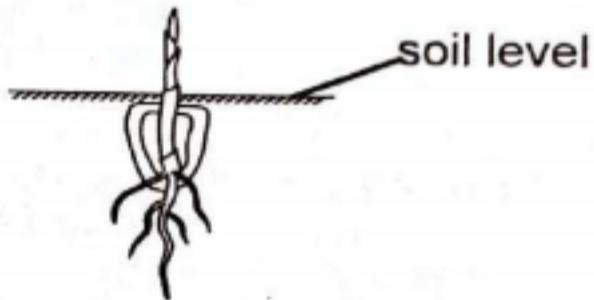
3. Apart from cassava, give any **one** other example of a root tuber.

4. How is a bright epicarp useful in the dispersal of tomatoes in the environment?

5. How are reflected sounds useful to a bat in flight?

11

The diagram below is of a germinating maize grain. Study and use it to answer questions 6 and 7.



6. State the reason why the above type of germination is referred to as hypogaeal.

7. Apart from a maize plant, give any **one** common example of a plant which undergoes the above type of germination.

8. Which type of change takes place when wood burns to ash?

9. How is scabies spread among school children?

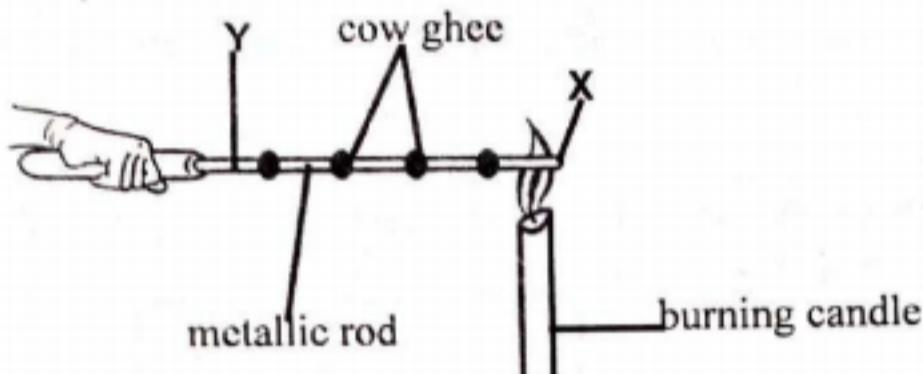
10. Mention any **one** way over cultivation leads to soil erosion in the environment.



11. Mention any **one** way food contamination can be prevented at home.

12. Name any **one** poultry disease that affects human beings, as well.

The diagram below shows a method of heat transfer. Study and use it to answer questions 13 and 14.



13

13. Name the method by which heat moves from **X** to **Y**.

14. State any **one** way the above method of heat transfer is useful to school going children.

15. How does regular ironing of clothes control skin diseases?

16. Name the part of the ear that changes sound vibrations into sound impulses.

17. How does refrigeration keep tomatoes fresh for a long time?

18. Why should babies with severe diarrhoea be given plenty of fluids to drink?

19. Give the importance of a dustbin in a school.

20. Apart from the sun, give any **one** other natural source of light energy in the environment.



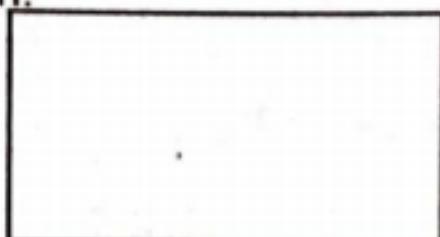
21. State the similarity between the product got from Saanen goats and that got from Brownswiss cattle.

22. Name the part of a fish that has a role similar to that of a car steering wheel.

23. Give the reason why wind is called a renewable resource.

24. How are mammals well adapted to breastfeeding their young ones?

25. In the space provided below, draw an instrument used to detect mastitis on a cattle farm.



14

26. Which component of a balanced diet do plants make with the help of nitrogen gas?

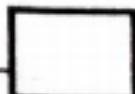
27. Give one way a fuse is adapted to its function in an electric circuit.

28. Name the blood vessel that supplies oxygenated blood to the kidneys from the aorta.

4

29. State any one way cilia in the nose are important to the human respiratory system.

30. Give any one way weeding the garden improves crop yields on a farm.



31. Apart from lubrication, mention any one other way of reducing friction in moving parts of machines.

32. In which way can a poultry farmer make a track on the profits and losses made on a farm?



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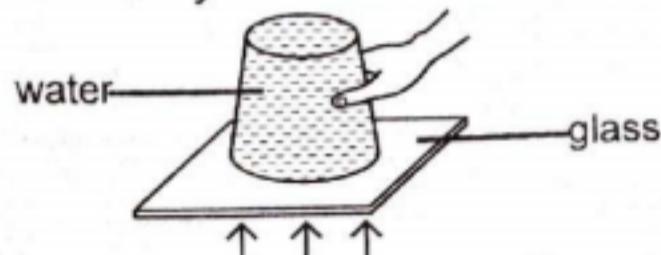
3



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33. State the reason why lightning is seen before thunder is heard yet both take place at the same time.

The diagram below shows a glass of water turned upside down with a cardboard. Study and use it to answer question 34.



34. Give a reason why the water did not pour out.

- 15
35. How does the size of a leaf affect the rate of transpiration in plants?

-
36. State **one** way a goat benefits from a tree where it is tied.

-
37. In which way is the mass of an object different from its weight?

-
38. How is fast flowing water useful in the production of hydroelectricity?

-
39. Which physical process changes ice into water on heating?

-
40. Apart from a cockroach, name any **one** other insect which undergoes an incomplete lifecycle.

SECTION B: 60 MARKS

Questions 41 to 55 carry four marks each.

-
- 41.a) Name any **one** example of a liquid used in thermometers.

-
- b) Convert 20°C to degrees fahrenheit.

(02 marks)



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c) State any one thing a doctor does to a clinical thermometer before using it on a patient.

42. a) Briefly explain the meaning of the following crop growing terms as used in crop growing:

i) mulching _____

ii) crop rotation _____

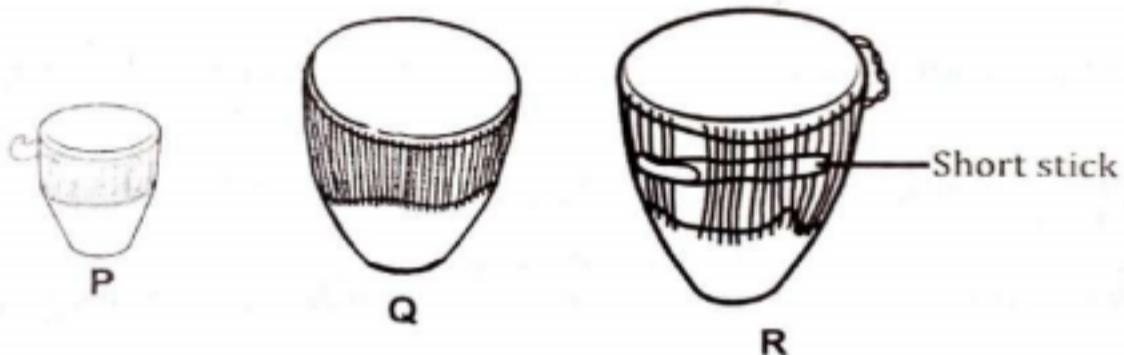
b) Name the garden tool used for carrying out the following farm practices:

i) harvesting cereals _____

ii) turning manure _____

43. The diagram below shows drums of different sizes.

Study and use it to answer the questions that follow.



a) To which group of musical instruments does a drum belong?

b) Which of the drums will produce sound;

i) of the lowest pitch? _____

ii) of the highest pitch? _____

c) State the importance of the short stick placed in drum marked R.

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44. In the table given below, part M shows the parts of a flower and part N shows their functions in a wrong order.

M: Parts of flower	N: Functions
sepals	attract pollinators
petals	produce and store pollen
anthers	receives pollen
stigma	protect the flower at its bud stage

Select from the table the correct functions of the parts and write them in the space provided below:

- sepals _____
- petals _____
- anthers _____
- stigma _____

17

45.a) Mention any two reasons why poultry may develop vices in a deep litter house.

- _____
- _____

b) Apart from debeaking, give any other two ways of controlling poultry vices.

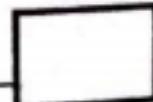
- _____
- _____

46. a) Mention any one group of organs that make food go bad.

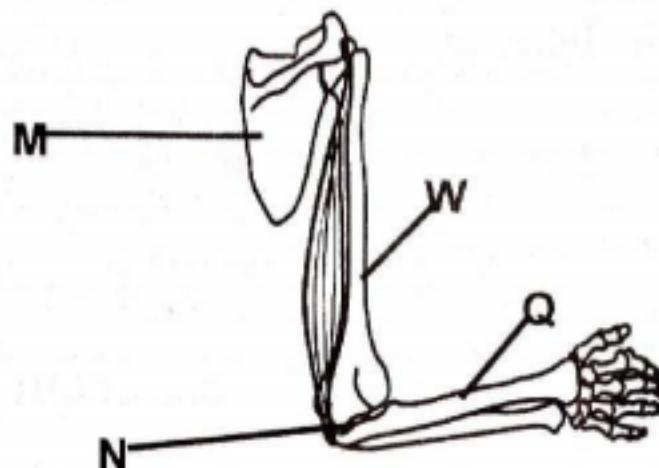
b) Give any two methods commonly used by people in rural areas to preserve food.

- _____
- _____

c) State one reason people give for preserving food.



47. The diagram below shows a part of the human skeleton. Study and use it to answer the questions that follow.



a) Name the type of movable joint located at part N.

b) What name is given to bones marked with letter;

i) W? _____

ii) Q? _____

c) In which way is bone marked with letter Q different from bone marked with letter M?

18

48. a) Mention any two exotic breeds of rabbits.

i) _____

ii) _____

b) Give any two reasons why a farmer may prefer keeping rabbits to keeping goats.

i) _____

ii) _____

49. a) Mention any two vaccines given to babies at birth.

i) _____

ii) _____

b) State one way immunisation boosts the body immunity of infants.

c) Give a reason why DPT vaccine is called a triple vaccine.



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7



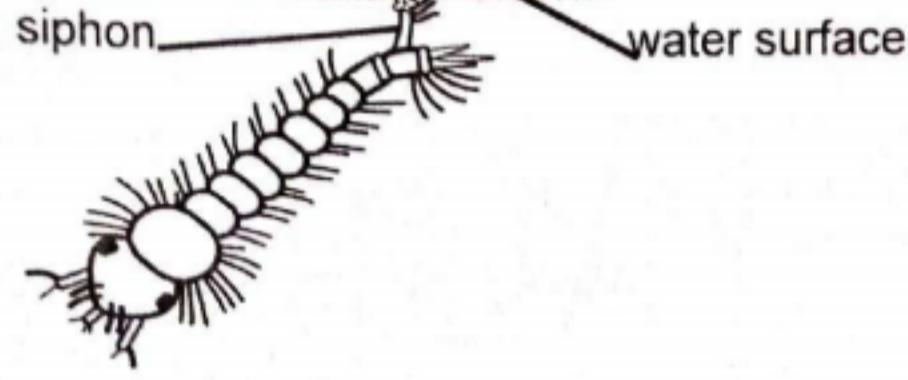
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50. The diagram below shows a stage in the life cycle of mosquitoes. Study and use it to answer the questions that follow.



a) Name the stage of development shown in the diagram above.

b) Identify the disease spread by the mosquito that develops from the above stage.

c) State any two ways of controlling mosquitoes at this stage.

i) _____

ii) _____

51. a) To which group of vertebrates do the following animals belong?

i) rats _____

ii) chameleon _____

b) Mention one similarity in reproduction between a rat and a chameleon.

c) How is a chameleon different from a rat in terms of reproduction?

52. a) State the use of the following parts in an ordinary torch.

i) reflector _____

ii) dry cells _____

b) Give any one reason why an ordinary torch does not use a fuse.

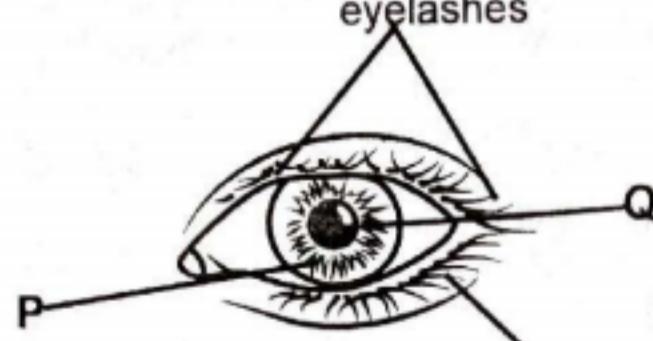
c) Why may a bulb in a torch fail to produce light even when the dry cells are arranged well?

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53. The diagram below is of a human eye. Study and use it to answer the questions that follow.

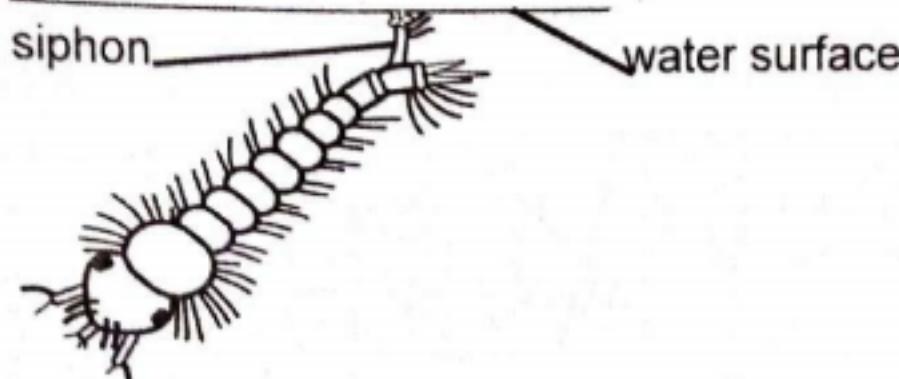


a) Name part marked with letter Q.

b) State the part of a lens camera that has the same function as part



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18

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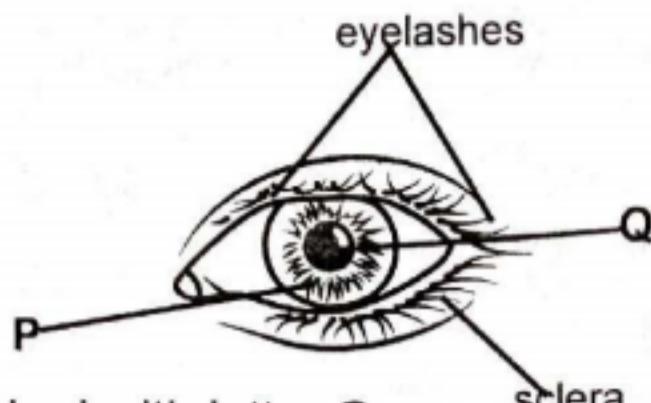
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b) Give any one reason why an ordinary torch does not use a fuse.

c) Why may a bulb in a torch fail to produce light even when the dry cells are arranged well?

53. The diagram below is of a human eye. Study and use it to answer the questions that follow.



- a) Name part marked with letter Q.
-
- b) State the part of a lens camera that has the same function as part P.
-
- c) Give one characteristic of images formed in the human eye above.
-
- d) How does part marked with letter P behave when a person is in much light?
-

54.a) By which process does food move through the alimentary canal?

b) Give one reason why proteins cannot be digested chemically in the mouth.

c) State the roles of the following parts of the alimentary canal in the digestive system:

- i) colon _____
- ii) ileum _____
-

55. a) You are given a litre of water, a glass and dry soil. Describe how you will show that soil contains air. (03 marks)

- i) _____
- ii) _____
- iii) _____
-

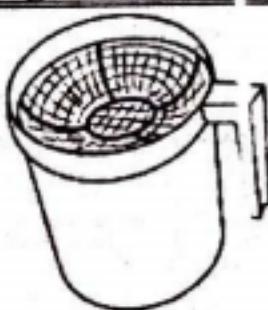
b) How are bacteria useful in soil formation?

20



THE SIPRO PRIMARY SEVEN INTEGRATED SCIENCE

NO.	LEVEL	CORRECT RESPONSE	WRONG ANSWER
1.	P.5	Filtration/ filtering	Sieving
2.	P.5	A ship is denser than water./ A ship's density is greater than that of water.	A stone is less dense than water.
3.	P.4/5	Carrots/ turnips/ sweet potato / Dahlia/ Beetroot/ White yam	Irish potato
4.	P.6	A bright epicarp attracts agents of seed/ fruit dispersal./ It attracts dispersal agents.	For attracting birds
5.	P.6	Help a bat to find/ locate food./ Help a bat to dodge obstacles during movement.	Helps a bird to fly
6.	P.4/3	The seed remains under the soil/ inside the soil./ The cotyledon remains inside the soil.	It has one cotyledon
7.	P.4/3	Wheat seeds/ sorghum seeds/ cowpea seeds/ millet seeds / Oat seed/ Barley seeds.	Bean seeds
8.	P.5	Chemical change	Physical change
9.	P.4/7	Through sharing clothes with infected people./ Through sharing bathing sponges/ towels/ basins./ Through body contact with infected people.	Through contaminated water
10.	P.5	The soil particles become loose and easily carried away by erosion agents.	It leaves the soil exposed to erosion agents
11.	P.4/3	By covering food/ left over food./ Washing hands before touching food./ Serving food in clean containers./ Serving food in a clean place./ Spraying adult houseflies using insecticides.	By sun drying
12.	P.5	Pneumonia	Coccidiosis/ Typhoid fever
13.	P.5	Conduction/ By conduction.	By convection
14.	P.5	It helps them to iron clothes./ Helps them during practical study./ For carrying out experiments.	Helps children to learn

		experiments./ Helps them when cooking food./ Warm food.	
15.	P.3	Regular ironing kills germs in clothes that cause skin diseases./ Removes folds that hide parasites that spread skin diseases./ Kills tiny vectors and parasites in clothes.	Regular ironing provides cleanliness of clothes.
16.	P.6	Cochlea	Semi-circular canals
17.	P.4	Cool temperatures (Low temperatures) prevent rotting of the tomatoes. / Low temperatures prevent multiplication of bacteria on tomatoes. /The coldness of fridge does not allow bacteria to multiply.	A fridge keeps tomatoes cool.
18.	P.4	To replace the lost water in the body ./ To prevent babies from being dehydrated.	To keep babies healthy and prevent death.
19.	P.4	Helps in collecting rubbish./ Is a collection of rubbish./ For temporary disposal of rubbish./ For dumping in waste paper (rubbish).	To burn rubbish.
20.	P.7	Dragon fly./ fireflies./ erupting volcanoes./ Stars	Moon / The sun
21.	P.5/6	Both are sources of milk./ Provide large quantities of milk.	Both provide me
22.	P.7	Caudal fin./ Tail fin./ Tail	Dorsal fin./ Head
23.	P.6	Wind can never be exhausted./ Used up./ Wind can be replaced naturally.	Wind cannot get exhausted.
4.	P.6	Mammals have mammary glands for producing breastmilk.	Mammals have
5.	P.6		
	P.4	Proteins	Carbohydrates

27.	P.7	A fuse has a thin wire that melts in case of a higher voltage than its rating./ It is made of an alloy of lead and tin which has a low melting point.	A fuse case of
28.	P.6	Renal artery	Pulmo
29.	P.6	Cilia filters inhaled air./ Trap dust from inhaled air./ Cilia cleans air inhaled.	They c
30.	P.4	Reduces competition for nutrients/ sunlight/ space/ Reduce hiding places for pests.	Makes
31.	P.7	By using ball bearing./ By using rollers./ Using wheels./ Smoothing moving parts of a machine.	By oili greasi
32.	P.5	By keeping farm records./ By having records about farm activities./ By making sales records.	By foll
33.	P.7	Light travels faster than sound./ The speed of light is more than that of sound in air./ Lightning travels faster than thunder in clear air.	Lightn
34.	P.3	Air exerts pressure on the hard paper which is equal to the pressure in the glass./ The pressure inside the glass is equal to that exerted on the hard paper.	The pr
35.	P.4	The bigger the leaf, the higher the transpiration rate , and the smaller the leaf, the lower the transpiration rate./ A big leaf has high transpiration rate while a small leaf has a low transpiration rate.	A big l transp
36.	P.7	A goat gets shade from a tree./ A goat feeds on plant leaves.	A goat
37.	P.5	Mass is the amount of matter in an object while weight is the force of gravity acting upon an object./ Mass is the amount of matter in an object while weight is how heavy or light an object is./ Mass is constant while weight changes from one place to another./	Mass i lightne weight in an o

		Mass is measured in grams (kg) while weight is measured in newtons.	
38.	P.7/6	Fast flowing water turns turbines to produce electricity. Fast flowing water turns turbines connected to generators which produce electricity.	Fast flowing water generating hydroelectricity.
39.	P.5	Melting	Evaporation / phase change
40.	P.3	Locust/ lice/ grasshopper/ termites/ praying mantis	Mosquito/ house fly
SECTION II			
41.	P.5	a) Mercury/ alcohol b) ${}^{\circ}\text{F} = ({}^{\circ}\text{C} \times \frac{9}{5}) + 32$ ${}^{\circ}\text{F} = (20 \times \frac{9}{5}) + 32$ ${}^{\circ}\text{F} = (4 \times 9) + 32$ ${}^{\circ}\text{F} = 36 + 32$ ${}^{\circ}\text{F} = 68 {}^{\circ}\text{F}$ c) Sterilizing the thermometer./ Re -setting the thermometer./ Shaking the thermometer.	Water ${}^{\circ}\text{F} = {}^{\circ}\text{C} \times 5 - 320$ ${}^{\circ}\text{F} = 9$ ${}^{\circ}\text{F} = 320\text{C} - 200$ ${}^{\circ}\text{F} = 120\text{F}$ Cleaning the thermometer.
42.	P.4	a) i) Mulching is the covering of top soil with dry plant materials. ii) Crop rotation is the growing of different types of crops on the same piece of land seasonally. b) i) sickle/ panga/ knife ii) garden fork/ spade/ shovel	Mulching is the covering of top soil with dry plant materials. Crop rotation is the growing of different types of crops on the same piece of land seasonally. Hoe Garden stick
43.	P.6	a) percussion musical instruments. b) i) drum R ii) drum P c) To make the vibrating surface tight./ To tighten the vibrating surface.	Drums Drum P Drum R To increase pitch
44.	P.4	i) Protect the flower at its bud stage. ii) Attract pollinators. iii) produce and store pollen iv) receives pollen	Attracts pollinators. Produce and store pollen. Receives pollen.

			Protects stage.
45.	P.5	<p>a) Giving poultry little feeds./ Lack of calcium in the feeds./ Delay in feeding of birds./ Boredom in the poultry house./ Overcrowding in the poultry house./ Delay in collecting of eggs.</p> <p>b) Adding calcium to the feeds./ Removing eggs in time./ Reducing the number of birds in a poultry house./ Putting perches in a poultry house./ Isolating birds with prolapse in time.</p>	Sickness
46.	P.5	<p>a) bacteria/ fungi</p> <p>b) sun drying/smoking</p> <p>c) To prevent food wastage ./ To promote food security./ To keep food for long.</p>	Earthwo Roasting To keep f
47.	P.7	<p>a) Hinge joint</p> <p>b) i) Humerus ii) Radius</p> <p>c) Bone Q is a long bone while bone M is a flat bone.</p>	Elbow jo Humerou Ulna Bone M is
48.	P. 4	<p>a) Chinchilla / Rex / New Zealand White./ Earlop/ Californian / Angora rabbits.</p> <p>b) Rabbits grow faster than goats./ Rabbits multiply faster in number than goats./ Rabbits need a smaller piece of land to rear than goats,</p>	White leg Rabbits gr produce a
49.	P. 5	<p>a) BCG vaccine/ polio vaccine</p> <p>b) Vaccines help the body to produce antibodies.</p> <p>c) DPT vaccine prevents three immunisable diseases.</p>	Measles va Vaccines c DPT vaccir diseases.
50.	P.3	<p>a) Larva stage</p> <p>b) Elephantiasis/ dengue fever/ yellow fever</p> <p>c) Introducing fish in ponds./ Oiling stagnant water./ Draining still water.</p>	Caterpillar Malaria Spraying u

51.	P. 6	a) i) mammals ii) reptiles b) Both undergo internal fertilization. c) A chameleon lays eggs while a rat gives birth.	Gnawing mam Amphibians Both lay eggs. A chameleon a rat lays eggs
52.	P. 7	a) i) To diverge light. / To direct light into a diverging beam. ii) Provide electricity required. b) An ordinary torch has a low voltage./ Uses little current. c) When a bulb is fixed poorly./ The dry cells may be depleted./ The spring may have rusted./ The filament in the bulb may be blown.	To reflect light To give energy A fuse doesn't
53.	P. 4	a) Pupil b) Diaphragm c) The image is real. / inverted. / Diminished./ Upside down./ smaller than the object./ Cast on a screen d) It constricts to reduce the size of the pupils (part Q)./ It relaxes to reduce the size of the pupil.	Iris Film The image is
54.	P. 5	a) Peristalsis// By peristalsis b) There aren't proteases/ enzymes that speed up the digestion of proteins. c) i) Absorbs water and mineral salts from the undigested food. ii) Final digestion takes place. / Digested food is absorbed. (absorption of digested food)./ For complete absorption of digested good.	By digestive There is s Enables d To keep f
55.	P. 5	a) i) put dry soil in a glass. ii) Pour water into the soil. iii) Air bubbles are seen escaping from the soil. b) Bacteria decompose organic matter./ To form humus./ Bacteria breakdown organic matter.	Pour wa Put then Bacteri humus.