



SUREKEY EXAMINATIONS BOARD
PRE-PLC SUPER SERIES (GENEVA)
2024

INTEGRATED SCIENCE

Time Allowed: 2 hours 15 minutes

Random NO.						Personal No.		

Candidate's Name:

Candidate's Signature:

School Name:

Read the following instruction carefully:

1. Do not forget to write your **school** or **district name** anywhere on this paper.
2. This paper has **two** sections: **A** and **B**. Section **A** has **40** questions and section **B** has **15** questions. The paper has **15 printed pages** altogether.
3. Answer **all** the questions. **All** answers to both sections **A** and **B** must be written in the spaces provided.
4. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
6. Do not fill anything in the table indicated: **"FOR EXAMINERS' USE ONLY"** and boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
QN.NO.	MARKS	EXR'S NO.
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
TOTAL		

SECTION A: 40 MARKS

Questions 1 to 40 carry one mark each

1. Name the communicable intestinal disease that makes a person to pass out blood-stained stool.

.....

2. State any **one** method that can be used to preserve skins from animals.

.....

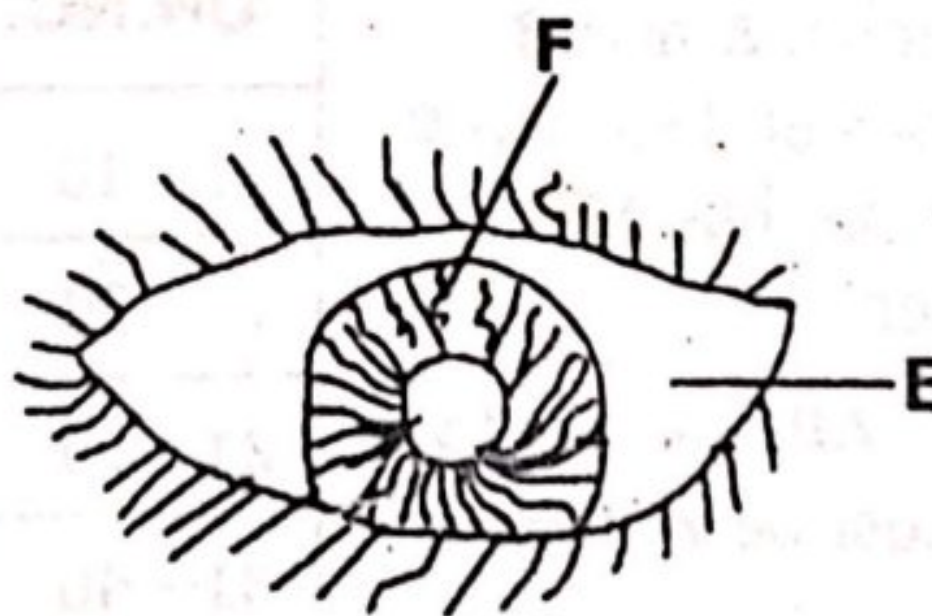
3. Give any **one** way in which animals benefit from plants in the environment.

.....

4. Name any **one** material transported by the blood capillaries in the human body.

.....

The diagram below shows the front view of the human eye. Use it to answer questions 5 and 6.



5. Name the part marked **E**.

.....

6. State the function of part marked **F** on the human eye.

.....

7. Apart from an ostrich, give any **one** other example of a flightless bird.

.....

8. State the difference in function between the root hairs and root nodules on a plant.

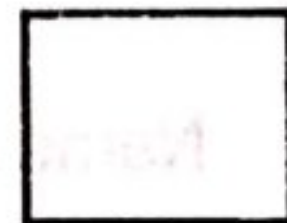
.....
.....

9. Give any **one** reason why farmers dock their female sheep.

.....

10. State any **one** way in which the amount of electricity produced by a bicycle dynamo can be increased.

.....



11. Give any **one** example of a natural fibre obtained from animals.

.....

12. Mention any **one** sign of scurvy in humans.

.....

13. Which part of the vacuum flask prevents heat loss or gain by conduction?

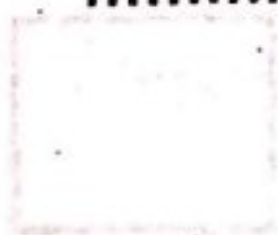
.....

14. State any **one** way in which alcohol is useful in hospitals.

.....

15. In which **one** way are perches useful in a poultry house?

.....



The diagram below shows a proper method of harvesting trees in agroforestry. Use it to answer questions **16** and **17**.



16. Name the method of harvesting trees shown in the diagram above.

.....

17. State any **one** advantage of harvesting trees using the method above.

.....

18. State the danger of seeking shelter under trees when it is raining.

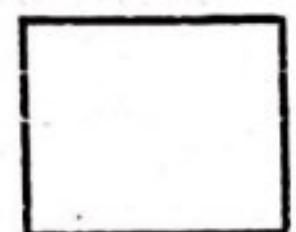
.....

19. Give any **one** way in which a school health club promotes health in a school.

.....

20. Write down any **one** example of a beverage perennial crop.

.....



21. Give any **one** way in which melanin is important in the human skin.

.....

22. Mention any **one** disease that can be worsened due to tobacco smoking.

.....

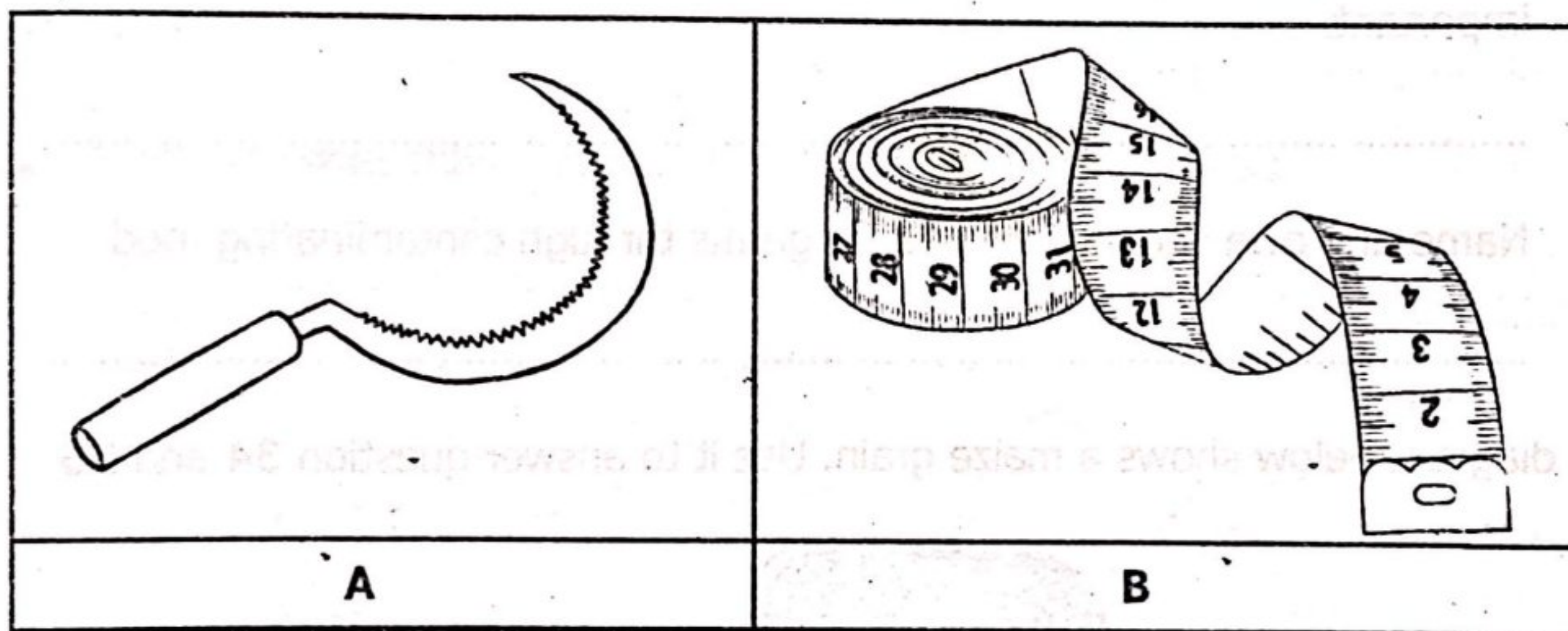
23. State any **one** function of the placenta during pregnancy.

.....

24. State any **one** way in which the spread of tapeworms can be prevented.

.....

The diagrams below show garden tools. Use them to answer the questions **25** and **26**.



25. Name the garden tool marked **B**.

.....

26. Give any **one** way in which garden tool marked **A** is useful to crop farmers.

.....

27. Give any **one** way in which the use of a gas cooker is helpful in the conservation of the environment.

.....

28. State any **one** way in which a periscope is useful to people.

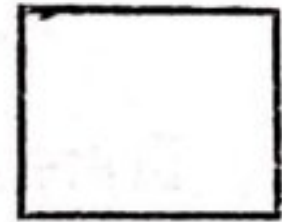
.....

29. Write down any **one** example of water impurity.

.....

30. Give any **one** disorder of the human digestive system.

.....



31. Give any **one** way in which honey is used in industries.

.....

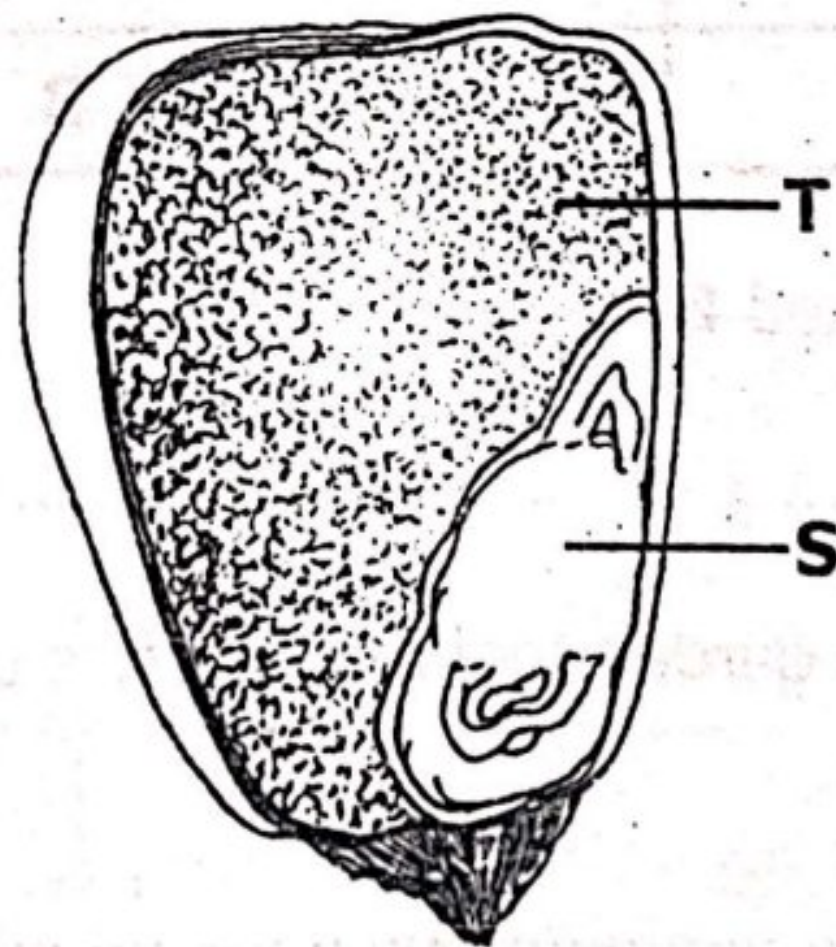
32. State any **one** way in which the jelly round the eggs of a toad is important.

.....

33. Name any **one** vector that spreads germs through contaminating food.

.....

The diagram below shows a maize grain. Use it to answer question **34** and **36**.



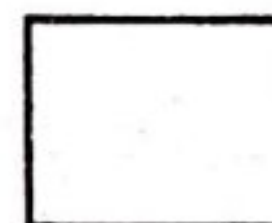
34. Name the part labelled **T**.

.....

35. Give the function of the part labelled **S** to a germinating maize grain.

.....

36. Name the defect that affects the cornea of the human eye.
.....
37. Which sexually transmitted disease (STD) attacks the human kidney?
.....
38. Give any **one** form of first aid that can be given to a victim of nose bleeding.
.....
39. State any **one** way in which people can reuse polythene bags at home.
.....
40. State any **one** characteristic of seeds dispersed by animals.
.....

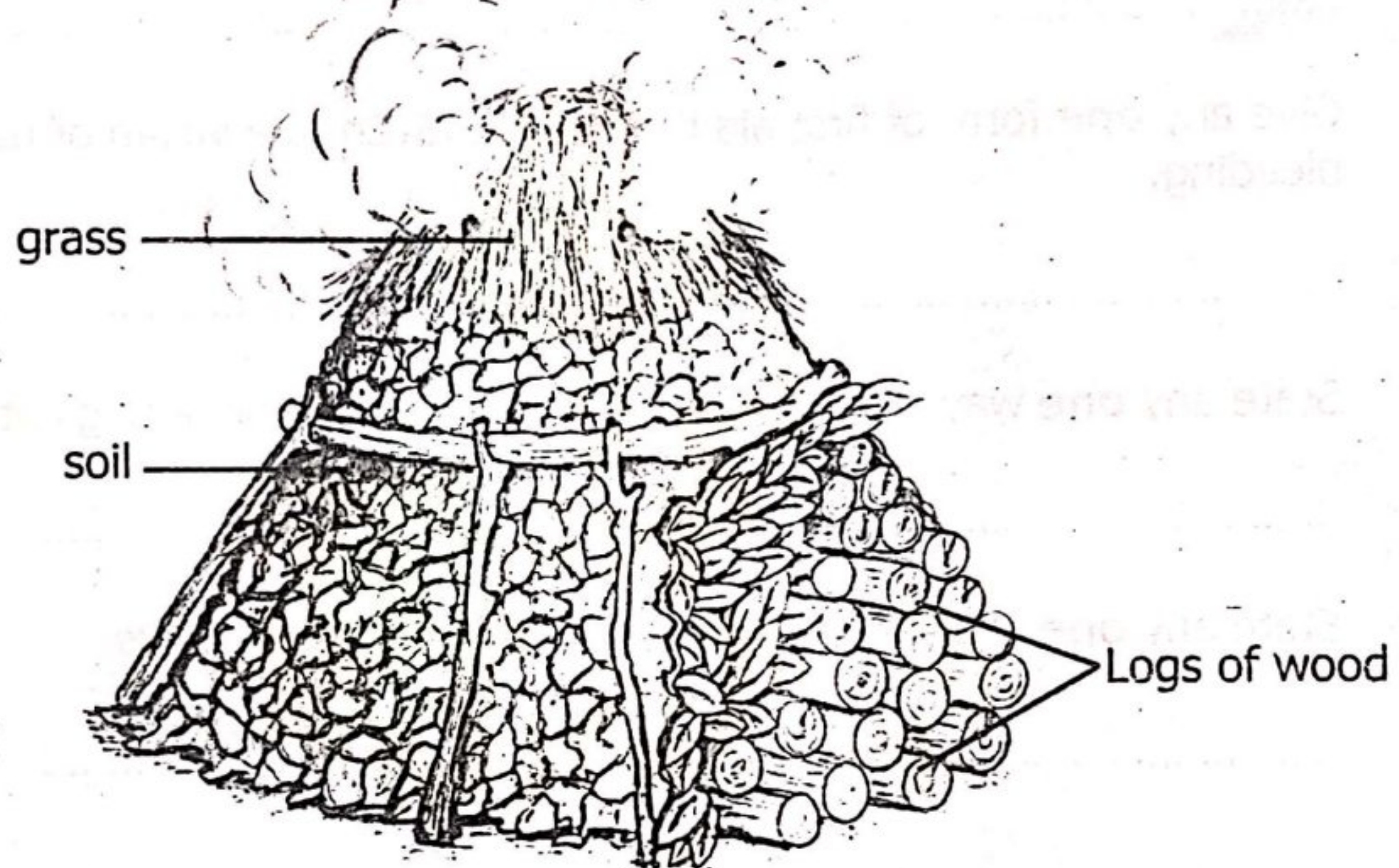


SECTION B: 60 MARKS

Questions **41** to **55** carry four marks each

41. (a) Name the method used to separate;
- (i) beans from stones :
- (ii) clean water and muddy water :
- (b) State any **two** effects of heat on liquids.
- (i)
- (ii)

42. The diagram below shows a method used to obtain wood fuel from the kiln. Study and use it to answer the questions that follow.



- (a) Identify the wood fuel made from the kiln above.

.....

- (b) Give **one** importance of the following on the kiln above;

(i) Soil :

(ii) Grass :

- (c) State any **one** way in which people can conserve the wood fuel made from the kiln above.

.....

43. (a) State any **two** characteristics of bacteria.

(i)

(ii)

(b) Give any **one** industry where yeast can be used when producing products.

.....

(c) Give any **one** way in which bacteria are harmful to people.

.....

44. (a) Write down any **two** local materials that can be used to keep the human body clean.



(i)

(ii)

(b) Give any **two** ways in which you can identify a clean home.

(i)

(ii)

45. (a) Apart from arachnids, write down any **two** other groups of arthropods.

(i)

(ii)

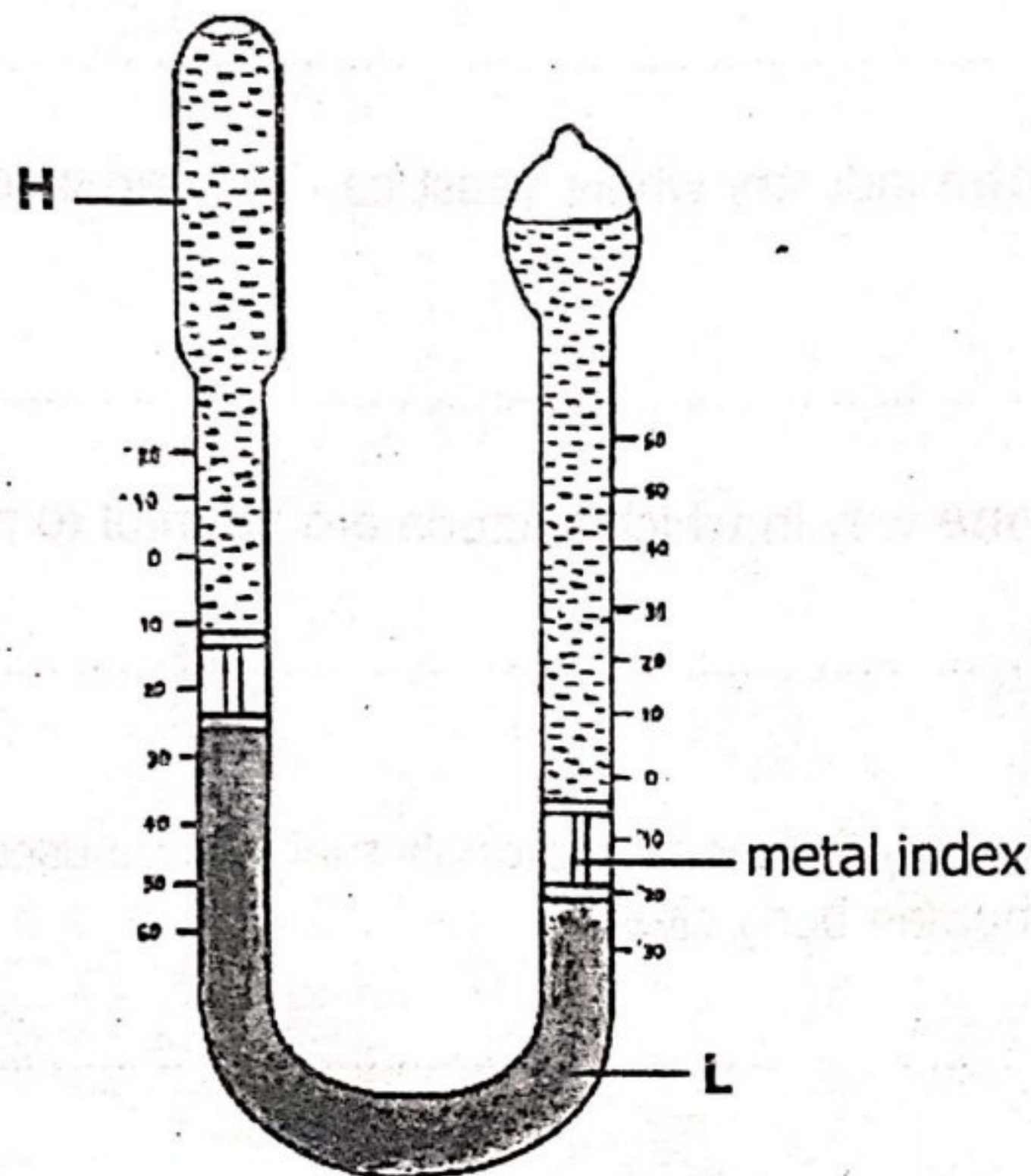
(b) State any **one** characteristic of arachnids.

.....

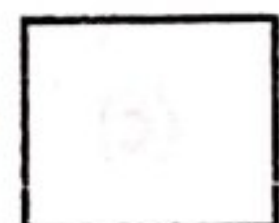
(c) Give any **one** example of an arachnid which is a parasite to cattle.

.....

46. The diagram below shows a type of thermometer. Study and use it to answer the questions that follow.



- (a) Name the liquids marked **H** and **L**.
- (i) **H** :
- (ii) **L** :
- (b) State the importance of the metal index on the thermometer above.
-
- (c) Give any **one** reason why the liquid marked **H** is used in the type of thermometer above.
-



47. (a) State any **two** ways in which a cattle farmer can control inbreeding in cattle.

(i)

(ii)

(b) Give any **one** exotic breed of cattle kept for meat production.

.....

(c) State any **one** reason why most farmers prefer keeping local breeds of cattle to exotic breeds.

.....

48. Chloe wanted to demonstrate the weight of a stone in water and air. She did the activities as shown:

(i) In spring balance 1: The stone was dipped in water.

(ii) In spring balance 2: The stone was swinging in air.

After she observed to find the actual weight of the stone from the spring balance.

(a) Given the two media water and air, which of the two made the stone to weigh less?

.....

(b) Give any **one** reason for your answer in (a) above.

.....

(c) State any **one** factor that affected the weight of the stone in the media.

.....

(d) Name the units in which Chloe measured the weight of the stone.

.....

49. (a) Write down any **one** type of stems found in flowering plants.

.....

(b) Name the system of flowering plants where the stems are found.

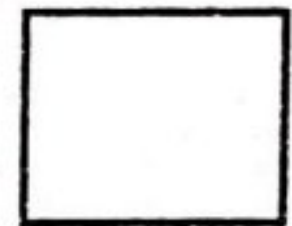
.....

(c) Give any **two** functions of stems to a flowering plant.

(i)

(ii)

50. (a) Name the group of simple machines to which each of the following belongs;



(i) Screw driver :

(ii) Ladder:

(b) Give any **two** ways in which friction can be reduced in moving parts of a machine.

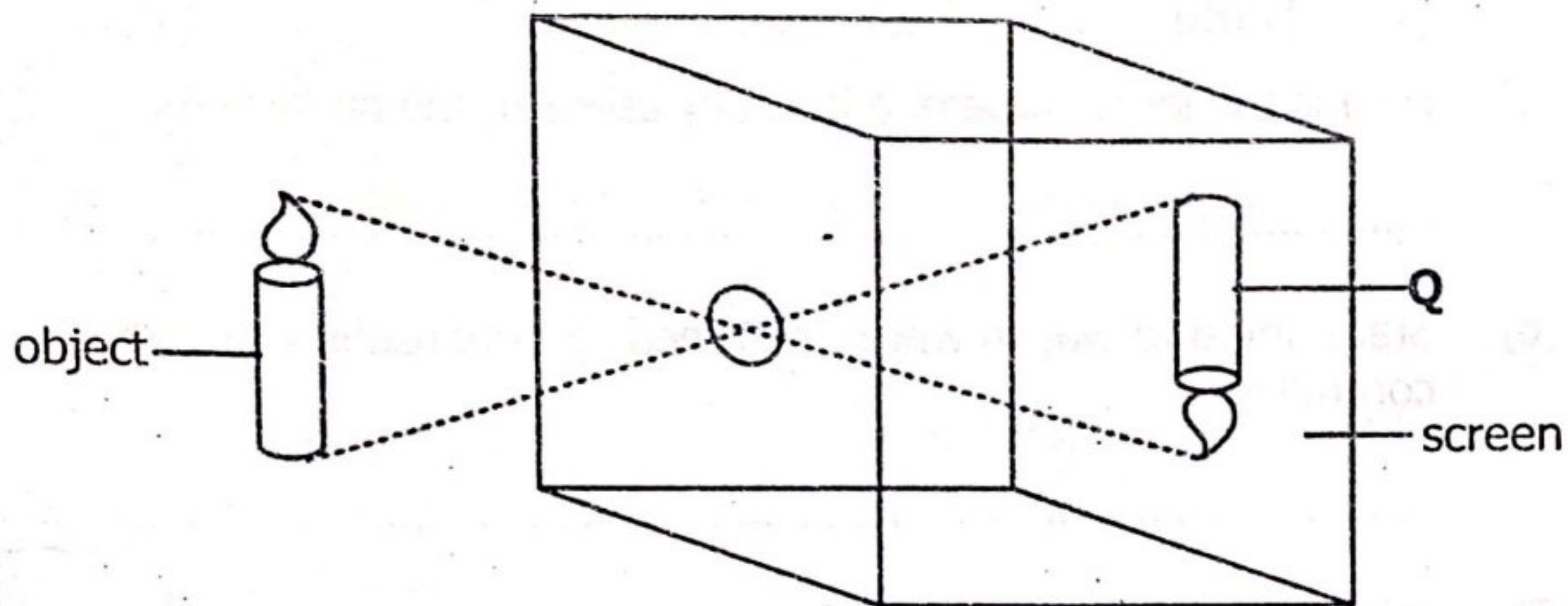
(i)

(ii)

51. The table below shows diseases of poultry, cause and signs of each disease. Study it carefully and complete it correctly.

Disease	Cause	Sign of the disease
.....	protozoa	Blood-stained diarrhoea
Fowl pox	virus
Newcastle	Twisted neck
.....	bacteria	Shrunken comb and wattle

52. The diagram below shows a pinhole camera. Study and use it to answer the questions that follow.



- (a) State the principle on which the diagram above works.

.....

- (b) Mention any **two** characteristics of part marked **Q** of the pinhole camera.

(i)

(ii)

- (c) Give the importance of the screen on the camera above.

.....

.....



53. (a) Name the disease spread to humans by;

(i) Infected dog :

(ii) Louse :

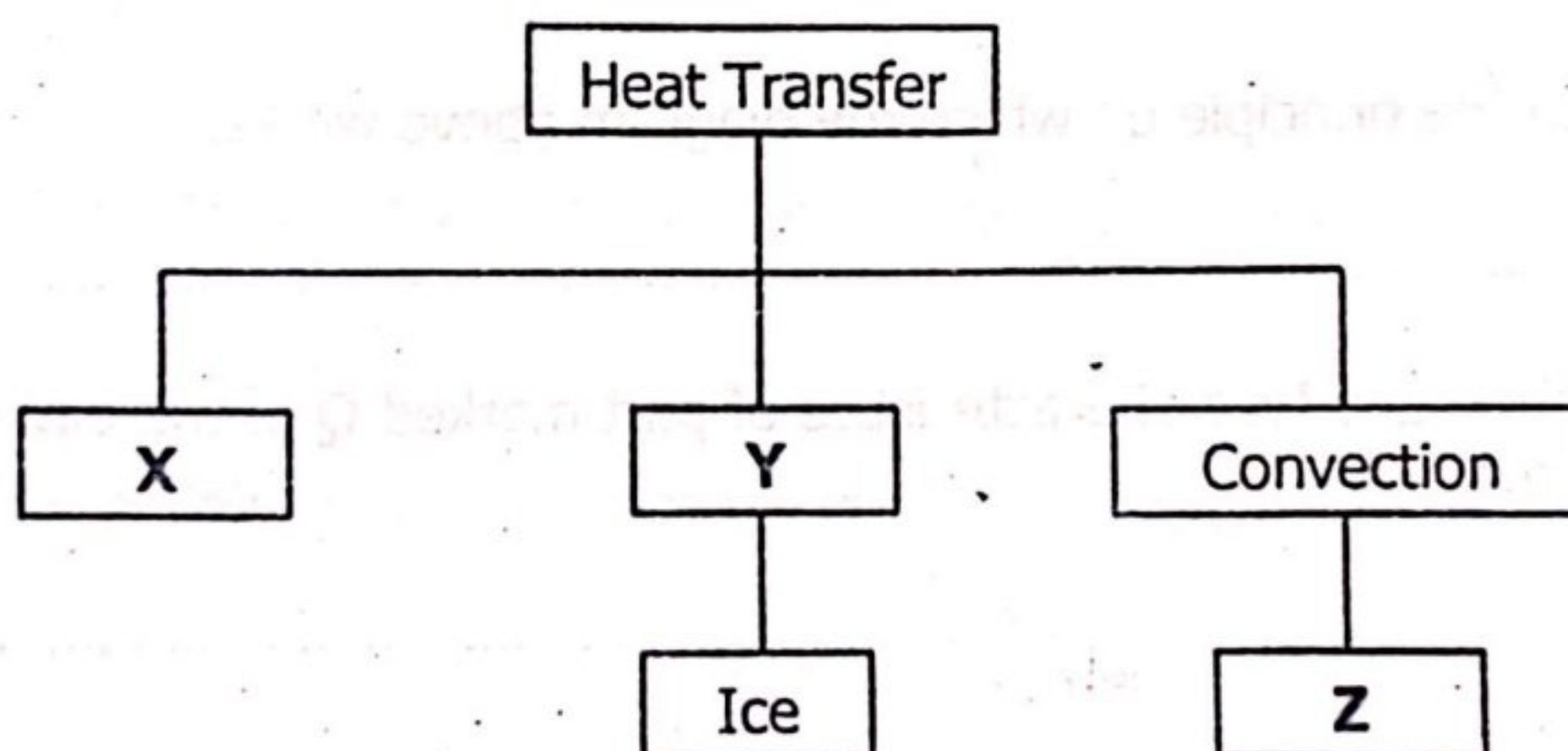
(b) How is the larva stage of a housefly useful in the pit latrine?

.....

(c) State any **one** way in which the breeding of houseflies can be controlled.

.....

54. The table below shows methods of heat transfer. Study and use it to answer the questions that follow.



(a) Name the methods of heat transfer marked **X** and **Y**.

(i) **X** :

(ii) **Y** :

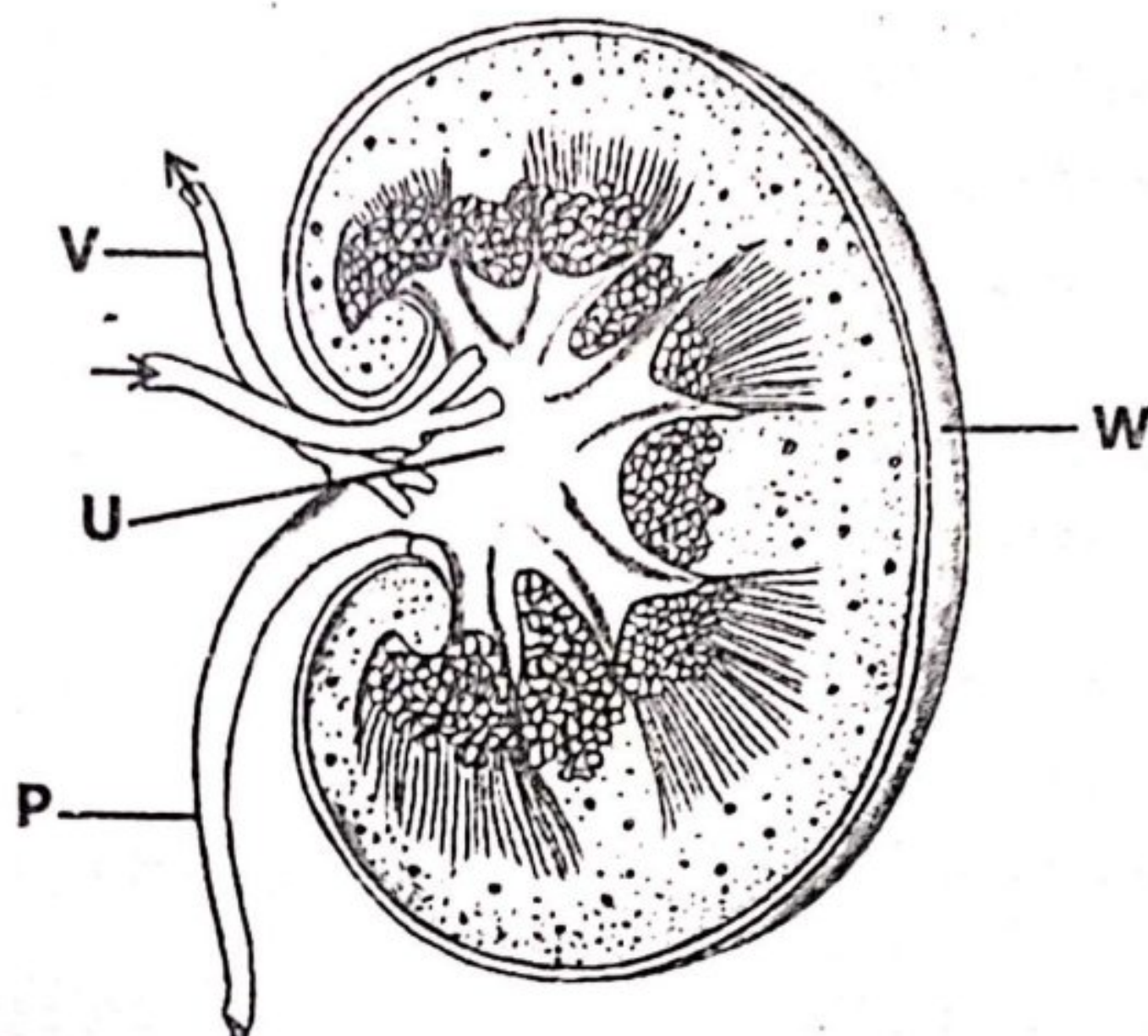
(b) Give any **one** state of matter that can be put at **Z**.

.....

(c) State any **one** way in which the method of heat transfer at **Y** is important to people.

.....

55. The diagram below shows the human kidney. Study and use it to answer the questions that follow.



- (a) Name the part of the human kidney marked **U**.
-
- (b) Give the function of the parts marked **V** and **W** to the human kidney.
- (i) **V** :
- (ii) **W** :
- (c) State the difference between part **P** of the human kidney and the urinary bladder in the urinary system.

.....

.....

