



SUREKEY EXAMINATIONS BOARD

PRIMARY LEAVING TARGET SET

2022

INTEGRATED SCIENCE

*Time Allowed: 2 hours 15 minutes*

Index No.						Personal No.		

**Candidate's Name:** .....

**Candidate's Signature:** .....

**School Name:** .....

**District Name:** .....

**Read the following instructions carefully:**

1. Do not forget to write your **school** or **district name** on the paper.
2. This paper has two sections: **A** and **B**.  
Section **A** has **40** questions and section **B** has **15** questions. The paper has **16** printed pages.
3. Answer **all** questions. **All** working for both sections **A** and **B** must be shown 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		
<b>TOTAL</b>		

## SECTION A: 40 MARKS

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

1. Name the body organ used for reasoning.

.....

2. Which disease vector spreads dengue fever to people?

.....

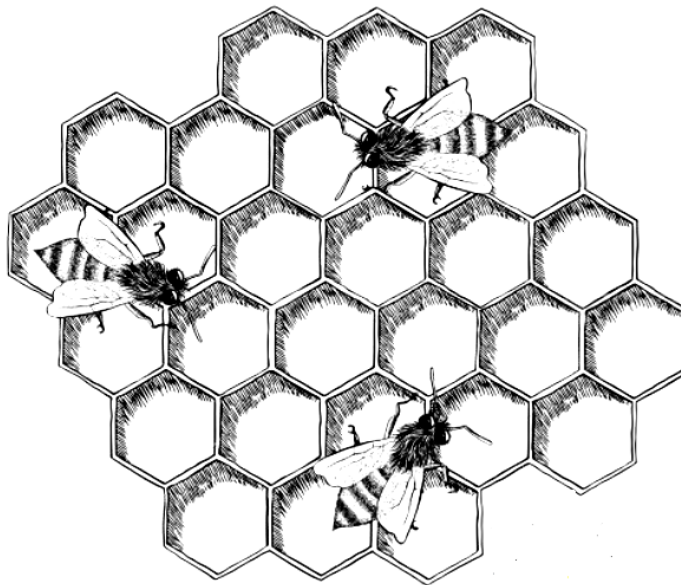
3. State any **one** use of PIASCY messages in preventing venereal diseases to school children.

.....

4. Give any **one** exotic breed of chicken kept for egg production.

.....

The diagram below shows structures built by worker bees in the hive. Use it to answer questions **5** and **6**.



5. Name the structures shown in the diagram above.

.....

6. State the importance of the above structures to the worker bees in the hive.

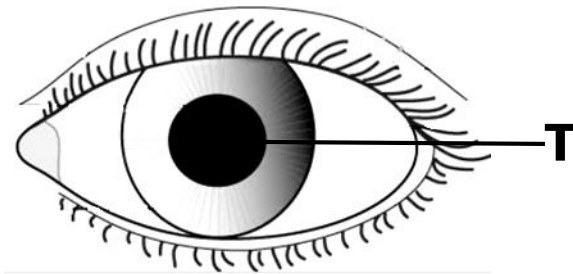
.....

7. Which group of arthropods breathe through gills?  
.....

8. Give any **one** reason why the pigsty should be built with the slanting floor.  
.....

9. What force enables a rubber to erase pencil diagrams?  
.....

The diagram below shows the front view of a human eye. Use it to answer question **10**.



10. State the function of part marked **T**.  
.....



11. Write down any **one** activity done by a crop farmer in the garden using a spade.  
.....

12. State a reason why it is not advisable to burst blisters on a burnt or scalded skin.  
.....

13. Give any **one** reason school children are encouraged to wear shoes or sandals.  
.....

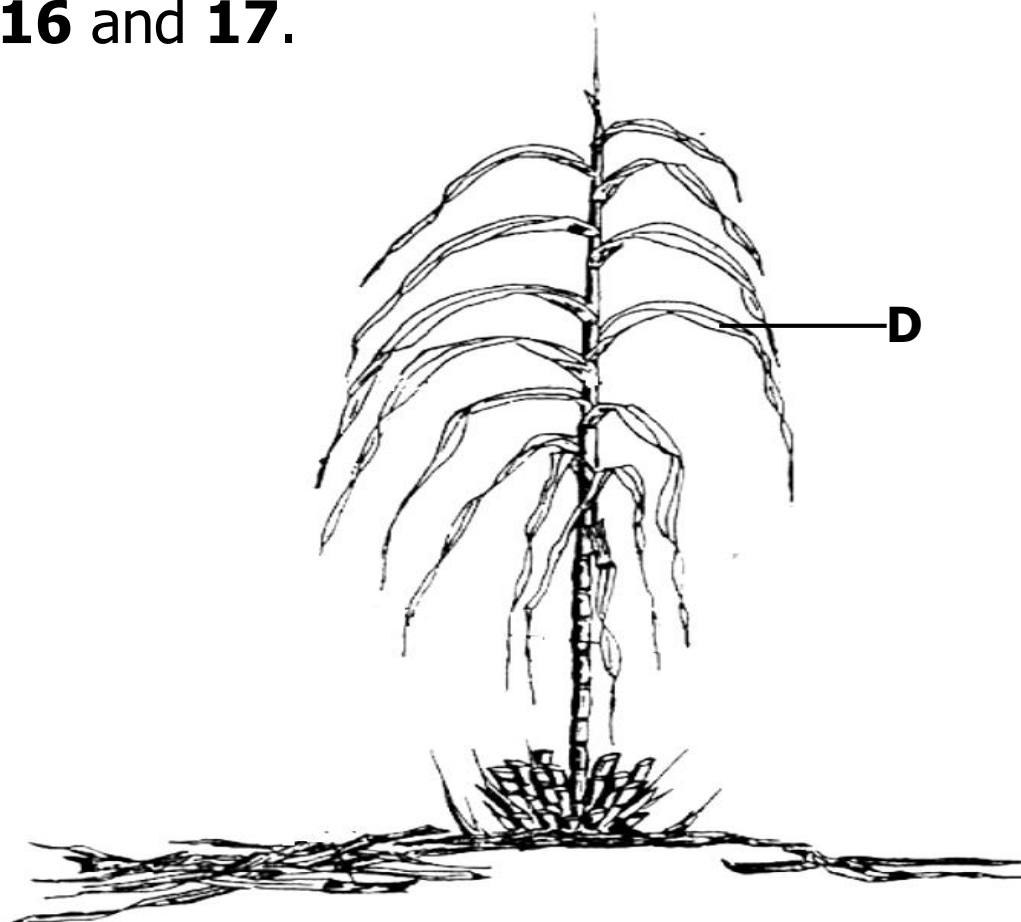
14. Which disease of the circulatory system is caused by abnormal increase in the number of white blood cells?

.....

15. How is the cochlea important in the process of hearing?

.....

The diagram below shows a sugarcane plant. Study it and answer questions **16** and **17**.



16. What type of leaf venation does part marked **D** have?

.....

17. How is the propagation of the above plant different from that of a millet plant?

.....

18. State any **one** factor that leads to weathering of rocks.

.....

19. Mention any **one** condition under which essential drugs can be stored.

.....

20. How is the movement of hip joint different from that of knee joint?

.....

.....



21. State any **one** characteristic of forms of energy.

.....

22. State any **one** activity carried out by school children to promote cleanliness at school.

.....

23. Give any **one** way in which heat transfer by radiation is important to people.

.....

24. How is a black jack adapted to animal dispersal?

.....

25. State the importance of bile juice during digestion.

.....

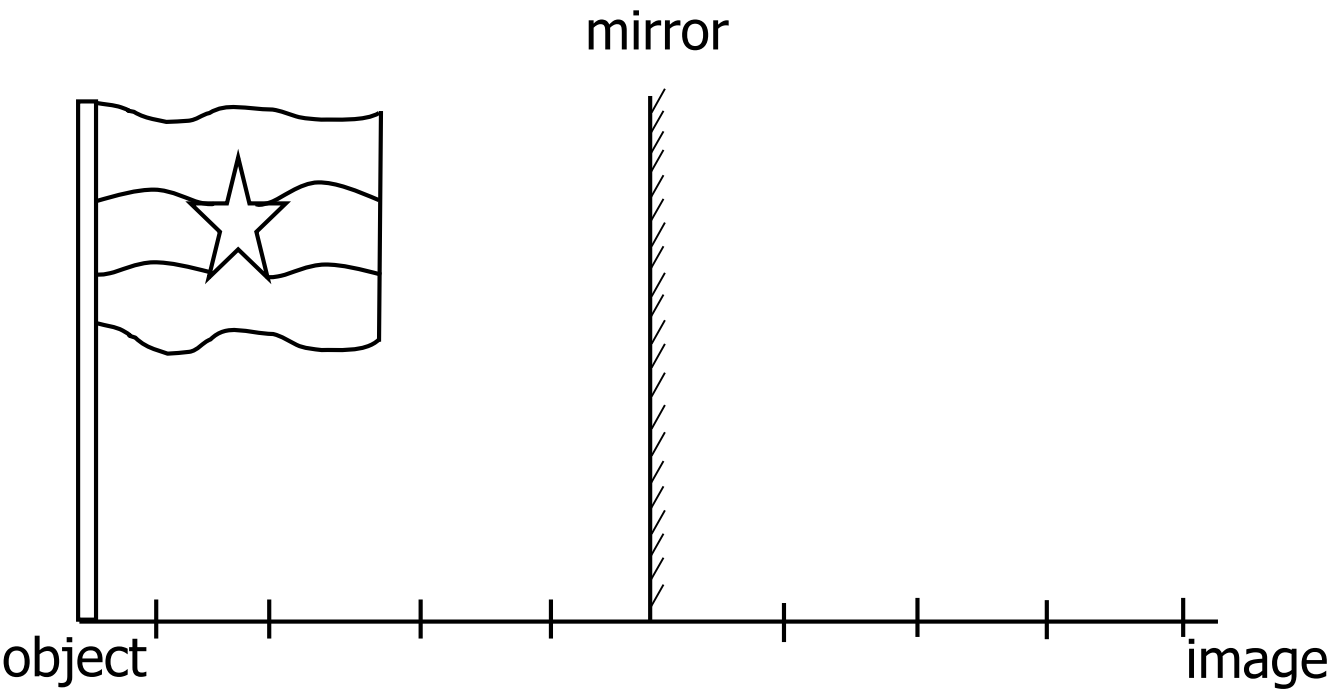
26. Apart from labour, give any **one** other requirement for starting a livestock farm.

.....

27. State the importance of oxygen during respiration.

.....

The diagram below shows an object placed in front of a mirror and it formed an object as shown. Study and answer the questions **28** and **29**.



28. Which type of mirror is shown in the diagram above?  
.....
29. Complete the diagram by drawing the image to show its appearance in the mirror.
30. Why does a person boiling water for preparing posho sprinkle some flour on water when it becomes hot?  
.....
31. Which element of Primary Health Care (PHC) helps to reduce infant mortality rate?  
.....
32. Apart from cotton, name any **one** other example of a plant fibre.  
.....
33. Which part of a billy is removed or destroyed during castration?  
.....

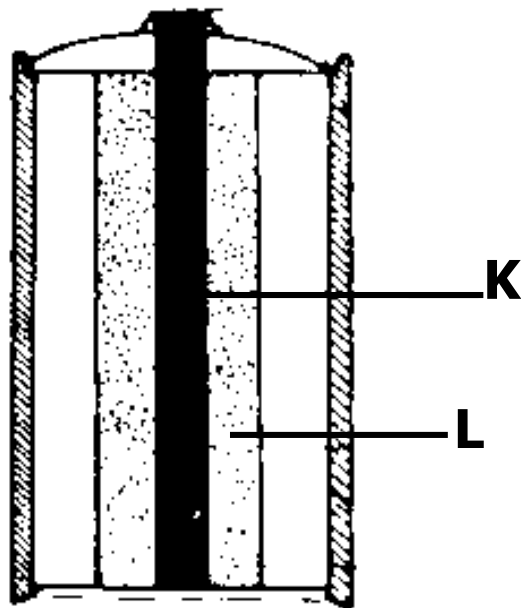
34. Give any **one** disease that can break out through 4F<sup>s</sup> germ path.

.....

35. What is the importance of spikes put on shoe soles?

.....

The diagram below shows a dry cell. Study and use it to answer questions **35** and **36**.



36. Name the part marked **K**.

.....

37. State the function of the substance marked **L** in the dry cell.

.....

38. Mention any **one** insect that uses mandibles for feeding.

.....

39. Why would you encourage a victim with nose bleeding to breathe through the mouth?

.....

40. Name the method of purifying water which provides water for mixing drugs in hospitals.

.....



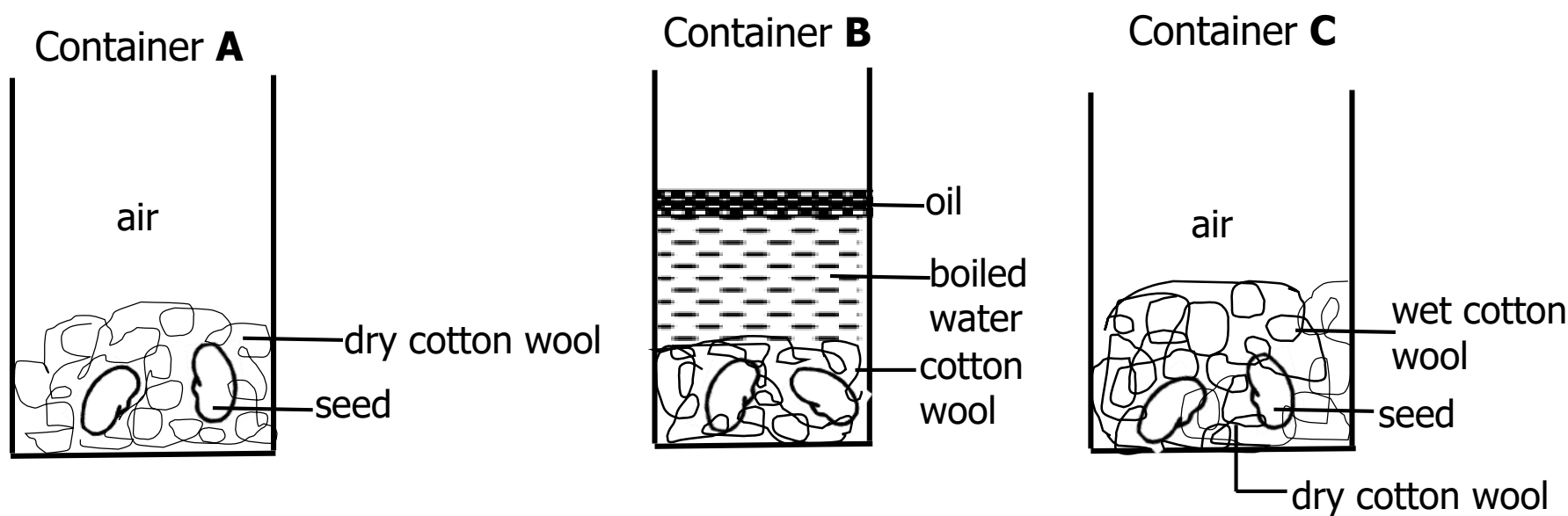
### SECTION B: 60 MARKS

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

41. a) Name the part of the digestive system that;
- (i) absorbs water .....
- (ii) rolls food into a bolus .....
- b) What is the major cause of constipation in digestion?
- .....
- c) State any **one** way of keeping the digestive system in proper working condition.
- .....
42. a) Write down any **two** causes of near drowning.
- (i) .....
- (ii) .....
- b) Why is a person giving first aid to a near drowned person advised to;
- (i) compress the victim's chest? .....
- (ii) apply kiss of life? .....



43. The diagram below shows an experiment about germination. Study it carefully and answer questions that follow.



a) In which of the containers will the seeds germinate after some days?

.....

b) Why would the seeds in the container you have identified germinate?

.....

.....

c) Give **one** effect of oil on the seeds in container **B**.

.....

d) State the role of the condition which is absent in container **A** during germination.

.....



44. a) Give any **two** examples of poisonous snakes.
- (i) .....
- (ii) .....
- b) State any **one** characteristic of poisonous snakes.
- .....
- c) Apart from snakes, mention any **one** other example of a reptile.
- .....

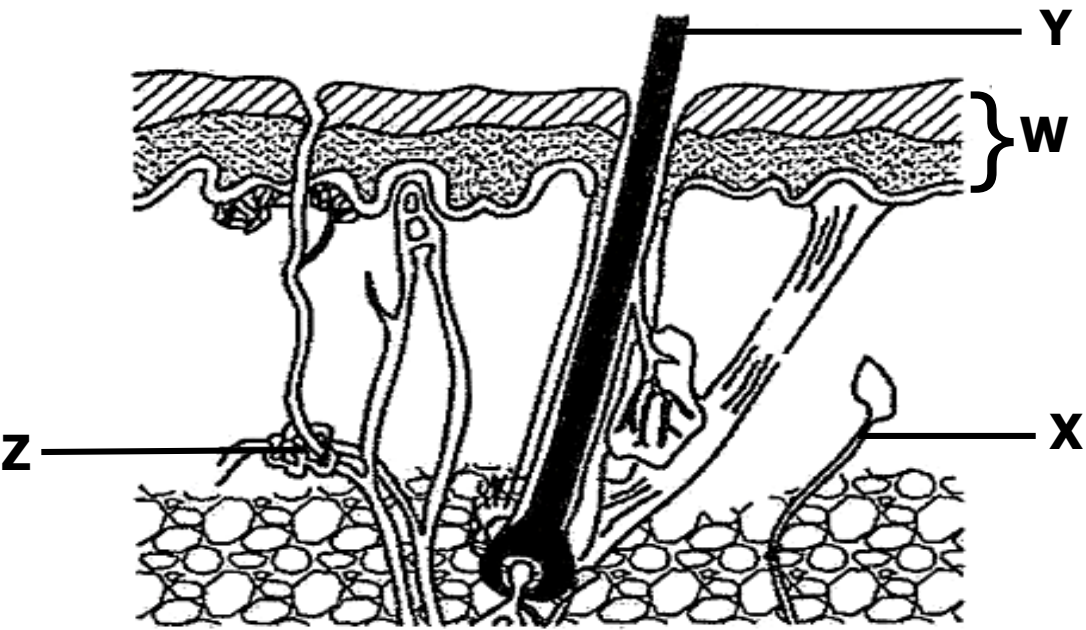
45. In the table below, part **A** shows blood components and part **B** shows their functions.

Part A: Components	Part B: Function
Blood plasma	Help in blood clotting
Red blood cells	Fight against disease germs
White blood cells	Carries digested food nutrients
Blood platelets	Carry oxygen in the body

Select from the table the correct function of a blood component and write it in the space provided below.

- (a) Blood plasma .....
- (b) Red blood cells .....
- (c) White blood cells .....
- (d) Blood platelets .....

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

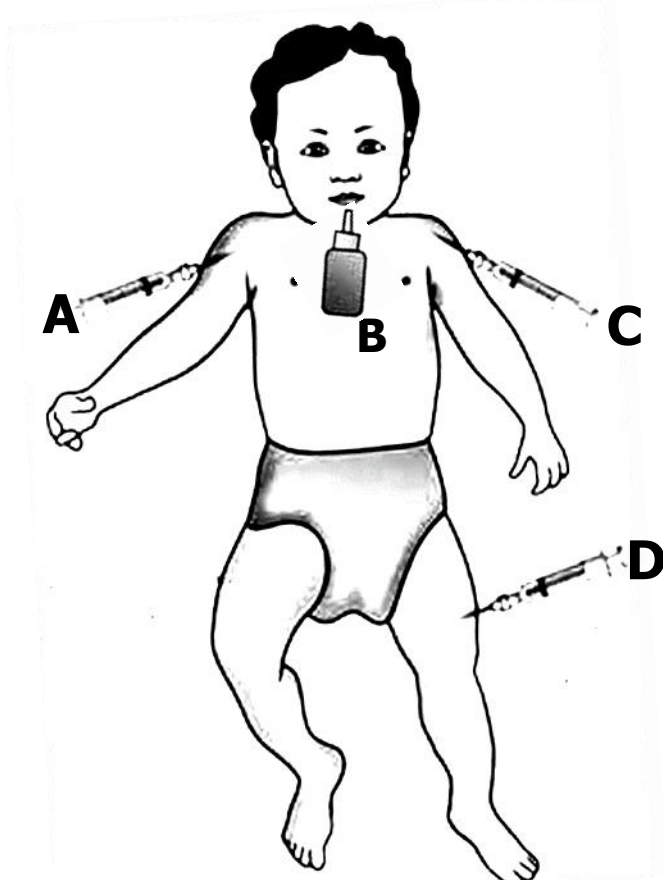


- a) Name the layer marked **W**.  
.....
- b) State the function of part marked **X**.  
.....
- c) Why does part marked **Y** stand upright on a cold day?  
.....
- d) What substance is produced by part marked **Z**?  
.....



47. a) Identify the method of grazing where cattle are fed on prepared pasture from indoors.  
.....
- b) State any **two** advantages of the above method of grazing cattle.
- (i) .....
  - (ii) .....
- c) Give any **one** reason why the above method of grazing cattle is used by few farmers.  
.....

48. The diagram below shows how different vaccines are administered on the baby's body. Study and use it to answer the questions that follow.



- a) Name the vaccines administered at the sites marked **A** and **C**.
- (i) **A** .....
- (ii) **C** .....
- b) Mention any **one** disease that is immunised against using the vaccine administered at the site marked **D**.
- .....
- c) How is the vaccine administered at site **B** different from the one administered at site **C**?
- .....

49. A patient was not feeling well. When the nurse measured her body temperature, it had increased by 3<sup>0</sup>C.

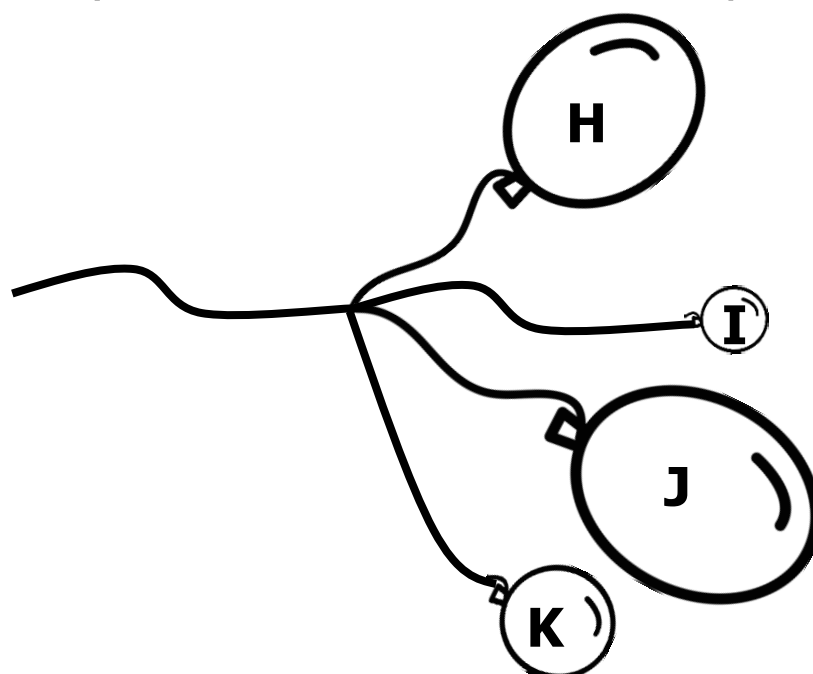
- a) What was the body temperature of the patient?
- .....
- b) Convert the body temperature above to Fahrenheit scale.

c) State any **one** difference between heat and temperature.

.....  
.....



50. The diagram below is of balloons representing different gases in the atmosphere. Study and use it to answer the questions that follow.



a) Name the gas represented by the balloon marked **H**.

.....

b) Which balloon represents the gas with the least percentage in the atmosphere?

.....

c) State any **one** use of the gas represented by balloon **J**.

.....

d) Mention any **one** gas that can be found in balloon marked **K**.

.....

51. a) Why do earthworms come out of the soil after it has rained?

.....

b) Give any **two** ways in which earthworms are important in the soil.

(i) .....

(ii) .....

c) State the reason why an earthworm dies when oil is poured on its body.

.....

52. The diagram below shows types of lenses. Study and use it to answer the questions that follow.



a) Name the type of lens marked **R**.

.....

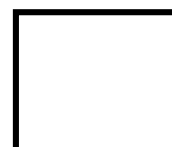
b) Which eye defect is corrected using the type of lens marked **S**?

.....

c) State any **one** cause of the eye defect you have given in (b) above.

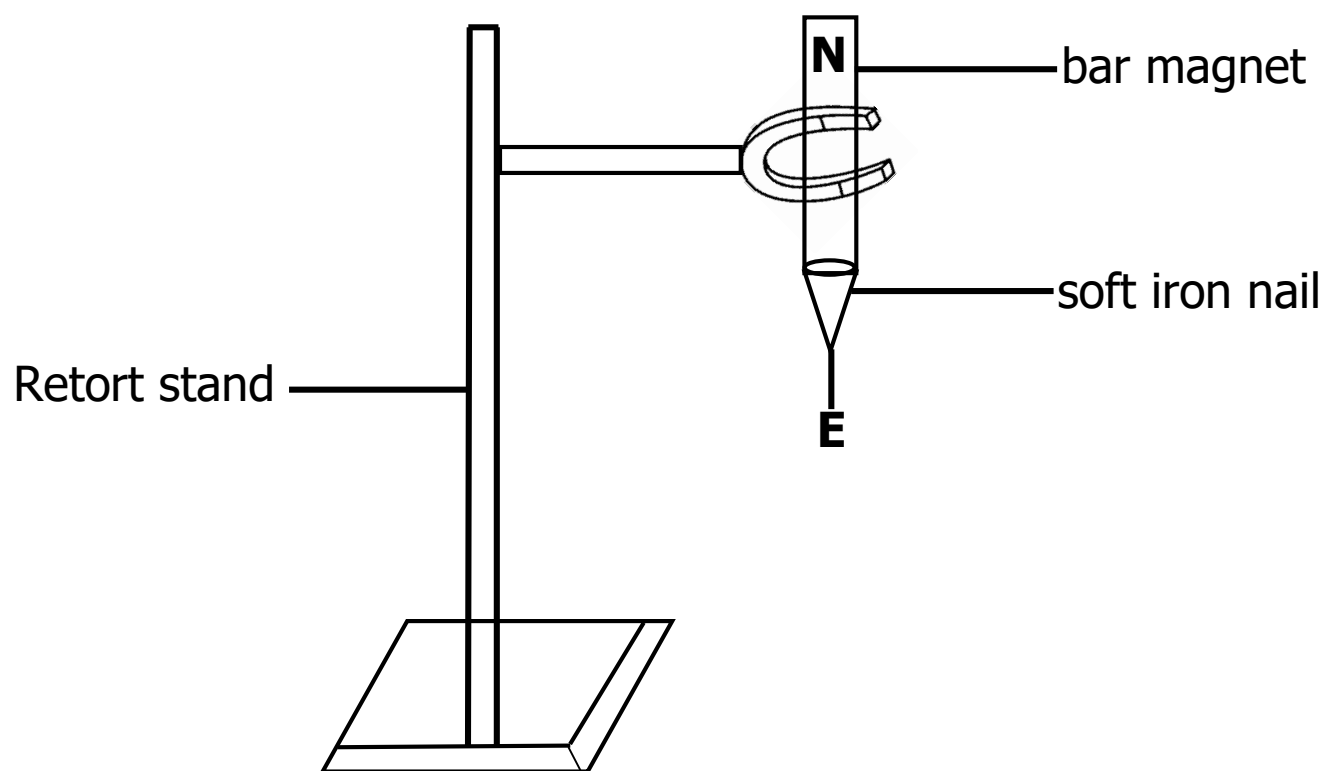
.....

d) Draw light rays on the lens marked **R** to show how the beam of light behaves on it.



53. a) State the reason why tree logs for making charcoal are;
- (i) covered with soil .....
- (ii) burnt under limited oxygen supply .....
- b) Give any **one** way in which charcoal burning affects the environment.
- .....
- c) Apart from charcoal, write down any **one** other example of wood fuel.
- .....
54. a) Write down any **two** secondary sex changes that occur in both adolescent girls and boys.
- (i) .....
- (ii) .....
- b) In which way is each of the following important to a foetus during pregnancy?
- (i) placenta .....
- (ii) umbilical cord .....

55. The diagram below shows a method of making temporary magnets. Study carefully and use it to answer the questions that follow.



- a) Name the method of making temporary magnets shown above.

.....

- b) Identify the magnetic pole of the soft iron nail at **E**.

.....

- c) Mention any **one** factor which determines the strength of the magnet made by the above method.

.....

- d) State the reason why a magnet made using the above method is regarded as a temporary magnet.

.....

