

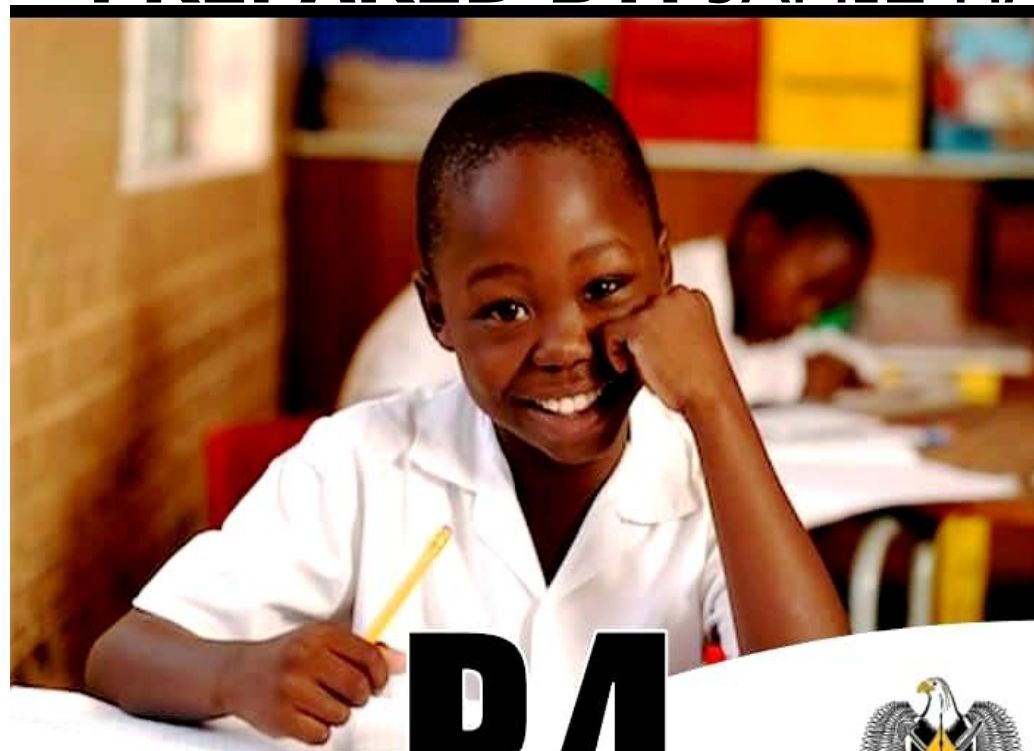


**SUREKEY EXAMINATIONS BOARD**  
**PRIMARY SEVEN PLE PREPARATION SET II**  
**2023**

**INTEGRATED SCIENCE**  
**OFFICIAL MARKING GUIDE**

**PREPARED BY: JAMIE HAMPHREY**

**0757451425**



SUREKEY EXAMINATIONS BOARD  
Presents



**P.4**



SUREKEY EXAMINATIONS BOARD

**OFFICIAL COMMENCEMENT OF**  
**LOWER PRIMARY**  
**TRANSITIONAL**  
*Examinations*

**2023** **October 16th – 19th**

**Let Quality speak for itself**

© 2023 Sure Key Examinations Board 0700758668

**P.4** **LOWER**  
**PRIMARY**  
**TRANSITIONAL**  
*Examinations*

**30,000/=**  
Online  
Registration  
Fee

**2023** **October 16th – 19th**

The Surekey Lower Primary Certificate of Education (LPCE) Examination for the 2023 junior candidates will officially start on 16<sup>th</sup> October 2023.

**THEME:** "Preparing quality learners for Upper Primary"

Schools interested should register with Surekey Examinations Board before 5<sup>th</sup> June 2023. Online registration is also available at 20,000/= per junior candidate. For inquires, contact 0700758668 / 0774088304 / 0755887056

**Let Quality Speak for Itself**

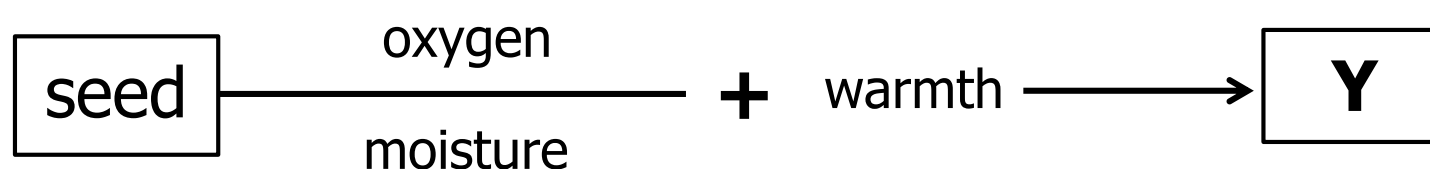
Visit: <https://surekeyexamination.com/> **TO REGISTER YOUR CHILD**

© 2023 Sure Key Examinations Board Lower Primary Transitional Examinations

## **SECTION A: 40 MARKS**

1. Name the part of a tapeworm that stores eggs.
  - **Segments.**
2. Which vector spreads filariasis to people?
  - **Culex mosquito / Female culex mosquito.**
3. State any **one** way in which soil erosion affects a crop farmer.
  - **Soil loses some of its fertility which leads to poor crop yields.**
  - **Leaves the soil bare and hard to cultivate.**
  - **Causes crops to be washed away.**
  - **Causes blockage of drainage system and irrigation channels.**
4. Give any **one** method of controlling spear grass in a maize garden.
  - **Slashing // Spraying herbicides // Mowing // Mulching // uprooting // Digging out.** (*Reject: Weeding*)
5. How is a tungsten filament able to increase electrical resistance in the bulb?
  - **It is coiled.**
  - **It is long and thin.**

The diagram below shows a growth stage in plants. Use it to answer questions **6** and **7**



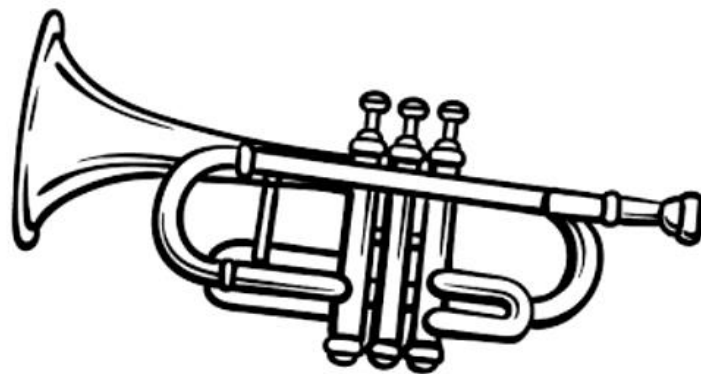
6. What is the name of the stage at **Y**?
  - **Seedling / young plant.**
7. Name the plant process that leads to the formation of stage **Y**.
  - **Germination.**
8. Which part of a ewe is removed during docking?
  - **tail.**
9. Name the condition that results from the destruction of red blood cells by plasmodia parasites.
  - **anaemia** (*Reject: Malaria*)
10. Why should rabbits be given a block of salt to lick?
  - **To add mineral salts in their bodies.**
11. How is food useful during the process of respiration in the human body?
  - **Food is burnt to produce energy / Food provides energy to the body.**
12. State any **one** way of conserving petroleum as an energy resource.
  - **Using petroleum products sparingly and wisely.**
  - **Using alternative sources of energy.**
  - **Using renewable energy.**
  - **Walking short distance.**

- **Switching off engines after use.**

13. Which method of heat transfer enables a person to use a flatiron?

- **Conduction.** (*Reject: Convection*)

The diagram below is of a musical instrument. Use it to answer questions **15** and **16**.



14. Name the group of musical instruments to which the musical instrument above belongs.

- **Wind musical instruments // aerophones.**

15. How can pitch of the above musical instrument be increased?

- **By pushing down valves.**

16. State any **one** feature of flowers pollinated by butterflies.

- **They have brightly coloured petals.**
- **Produce scent.**
- **Produce nectar.**
- **Produce few pollen.**
- **Have large petals.**
- **Have sticky stigmas.**

17. Name the group of annual crops that store seeds in pods.

- **Leguminous crops / legumes.**

18. State any **one** way in which a tilapia is similar to a newt in the way they multiply.

- **Both lay eggs.**
- **Both undergo external fertilization.**

19. What first aid would you give to a casualty who has got a cracked bone?

- **Tie splints around the cracked limb.**
- **Tie an armsling around the cracked limb.**

20. Name the structures in the vein that have the same function as the kink on the clinical thermometer.

- **the valves.**

21. Mention any **one** natural factor that lowers the quality of the environment.

- **Floods // landslides // drought // lightning // hailstorms.**

22. State any **one** danger of harmful bacteria to a livestock farmer.

- **Make milk to go bad.**
- **Make animal feeds to go bad.**
- **Cause diseases to farm animals.**

23. Give any **one** life skill that adolescent girls need to develop in order to safeguard themselves against early pregnancy.
- **Peer resistance.**
  - **Assertiveness.**
  - **Effective communication.**
  - **Decision making.**
  - **Coping with stress.**
  - **Creative thinking.**
  - **Coping with emotions.**

**REJECT**

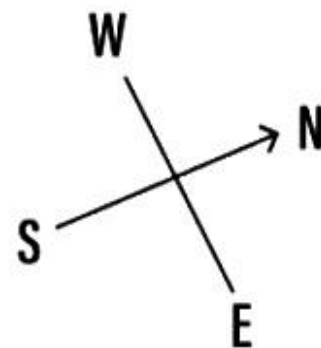
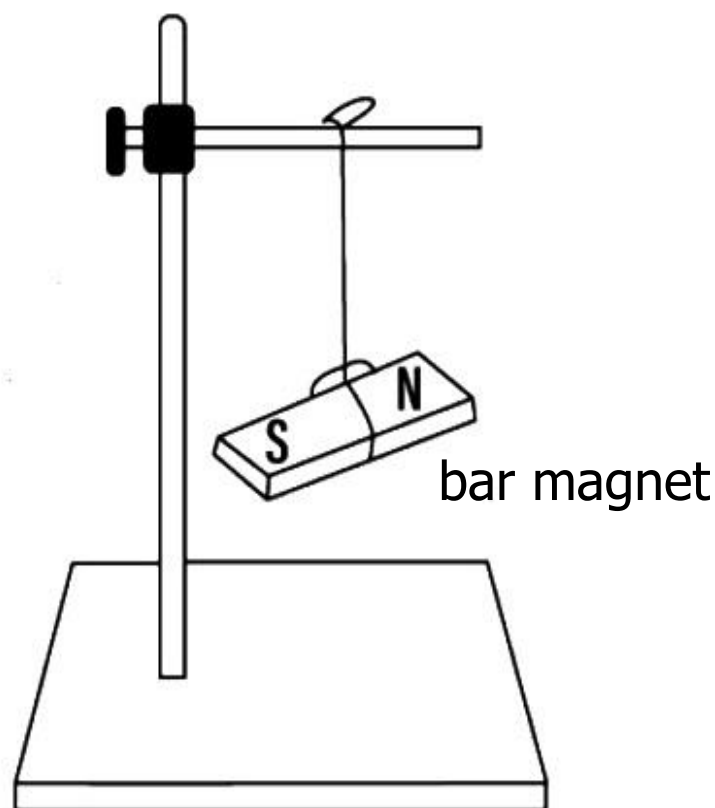
- *Abstaining from sex.*
- *Educating adolescents about the dangers of early pregnancy.*
- *Keeping away from bad peer groups and joining health clubs.*
- *Educating adolescents about body growth and changes.*
- *Following PIASCY messages.*

**Advice to the teacher**

- *Guide learners to carefully distinguish between life skills and lifestyles / habits / practices*

24. Name the structure on the top bar hive that prevents the queen bee from mixing eggs with honey.
- **Queen excluder.**

The diagram below shows a property of magnets. Use it to answer questions **25** and **26**.



25. Which property of magnets is shown in the diagram above?
- **A freely suspended magnet rests in the North-South direction.**
26. Give **one** way in which the property of magnets above is useful to pilots.
- **Helps pilots to find direction of places using magnetic compass.**
27. Give any **one** advantage of food taboos in the community.
- **Help to conserve wildlife.**
  - **Help some families to get enough food.**
  - **Help to conserve the environment.**
- (Reject: Instill good eating habits to people)*

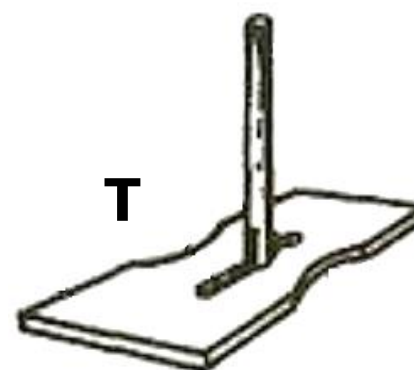
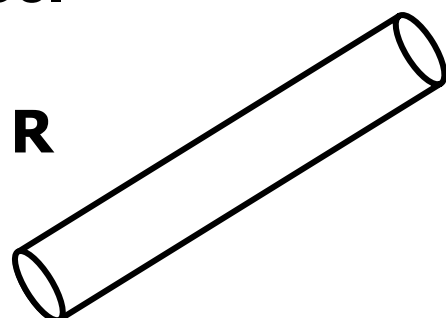


28. State any **one** characteristic that makes dissolving of salt in water a physical change.
- **It is reversible.**
  - **No new substance is formed.**
  - **No heat or light is given out or used.**
  - **There is no change in weight.**
29. Apart from washing, give any **one** other way in which bad smell can be controlled in bed sheets.
- **Drying bed sheets.**
  - **Applying perfumes in bed sheets.** (*Reject: Ironing*)
30. How does a shrimp benefit from shedding its cuticle?
- **A shrimp grows/increases in size / grows bigger in size.**
  - **Shedding its cuticle promotes its body growth.**
31. Name the system of keeping chicken where birds are kept in movable structures in an open floor.
- **Fold system / pen system.** (*Reject: fold pen system*)
32. State the similarity in function between human brain and the human ear.
- **Both balance the body.**
- Note well:**
- *The functions of the brain is taught in P.4 under body organs.*
33. A stone weighing 21grams with mass per unit volume of 7g/cc is immersed in water. How much water will it displace?
- **Volume =  $\frac{\text{mass}}{\text{density}}$**   

$$= \frac{21^3\text{g}}{7_1\text{g/cc}}$$

$$= 3\text{cc} \quad \text{Therefore, a stone will displace 3cc of water.}$$
34. How does deforestation affect the production of hydroelectricity?
- **Affects rain formation which reduces the volume of water in rivers.**

The diagram below shows structures commonly put on pit latrines. Use it to answer questions **35** and **36**.



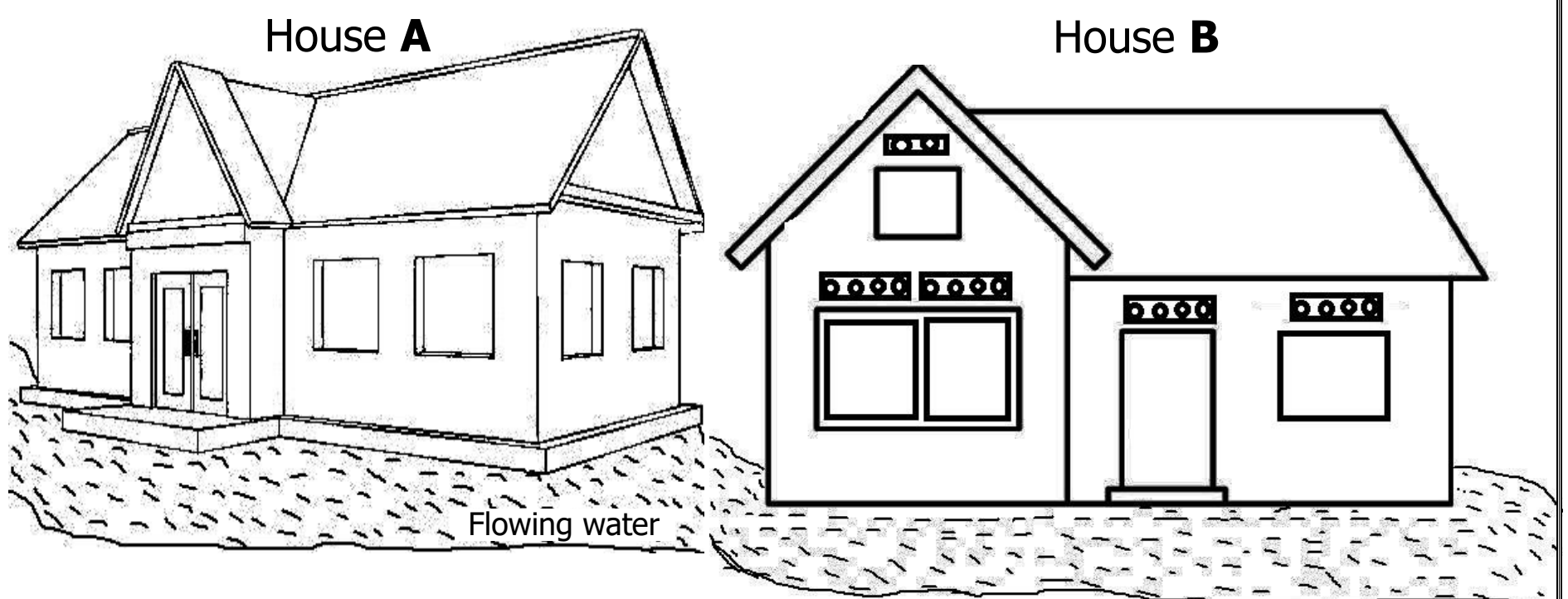
35. In which way is the function of structure marked **R** similar to that of ventilators on a living house?
- **Both let out warm / smelly air / bad smell.**
36. Which type of a pit latrine requires the use of structure **T** on the hole?
- **Ordinary pit latrines / Conventional Pit latrine.**  
*(Reject: Convectional Pit Latrine)*

37. State any **one** way in which good posture is important to the body.
- **Prevents bone deformation.**
  - **Prevents body aches at older age.**
  - **Promotes proper digestion of food.**
38. In which **one** way do caecilians help to improve soil fertility?
- **They help to aerate the soil.**
  - **Their wastes add humus to the soil.**
- (Reject: They die and form humus)*
39. Give any **one** disadvantage of having many industries in an area.
- **Leads to environmental pollution.**
  - **Promotes deforestation.**
  - **Leads to destruction of the environment.**
  - **Leads to destruction of habitats for wildlife.**
  - **Smoke and other fumes from industries damage the respiratory system.**
  - **Leads to displacement of people in an area.**
40. How do people installing electricity on poles prevent electric wires from breaking due to contraction on cold days?
- **By leaving electric wires sagging / loosely fixed between poles**
  - **Fixing electric wires loose between poles.**

### **SECTION B: 60 MARKS**

41. a) How is charcoal formed?
- **By burning wood under the limited supply of oxygen.**
- b) What form of energy is stored in charcoal?
- **Chemical energy.**
- c) State any **two** ways in which the use of charcoal is dangerous to the environment.
- **Smoke from burning charcoal causes air pollution.**
  - **Burning charcoal can burn household property.**
  - **Burning charcoal can lead to burns.**
  - **Charcoal burning causes deforestation.**
  - **Charcoal burning destroys habitats for wildlife.**
42. a) Apart from the liver, give any **two** other parts of the human digestive system that produce juice.
- **The pancreas.**
  - **The stomach.**
  - **The mouth.**
  - **The ileum.**

- b) Name the food substance acted upon by the digestive juice produce by the liver.
- **Fats / fats and oils / lipids.**
- c) Give any **one** health habit that helps to keep the digestive system in proper working condition.
- **Feed on a balanced diet.**
  - **Wash hands before eating food.**
  - **Do regular physical exercises.**
  - **Chew food properly.**
  - **Limit alcohol intake.**
  - **Eat well cooked food.**
43. a) Apart from suckers, mention any **two** other materials that can be used to propagate pineapples.
- **Crowns // Slips.**
- b) State any **two** advantages of vegetative propagation.
- **The plant matures in a short time.**
  - **Plants need less attention**
  - **The young plants get food from the parent plant.**
  - **Only one plant is needed to produce offspring.**
  - **Does not involve agent of pollination or dispersal.**
  - **Helps to maintain good plant characters.**
  - **Seedless plants are propagated.**
  - **Controls unnecessary distribution of plants in an area.**
  - **Helps plants to escape risky seedling stages**
44. The diagram below shows two houses **A** and **B**. Study and use it to answer the questions that follow.



- a) Which house will be greatly affected by flowing water during rainy season?
- **House B / B**
- b) Why would the house in a) above be greatly affected by flowing water?
- **Has no veranda to prevent flowing water from entering the house.** (Accept: Lacks a veranda)

- c) What advice would you give to the owner of the house given (a) above be to control the effect of flowing water during rainy season?
- **To put/ construct/build a veranda on the house.**
- d) Identify the important part missing on house **A**.
- **Ventilators.**

- 45 a) Write down any **two** processes that lead to the production of heat.
- **Respiration // burning // fermentation // decomposition // volcanicity.**
- b) Give any **two** ways in which a poultry farmer uses heat.
- **Helps in incubation of eggs.**
  - **Helps in debeaking of birds using a hot knife.**
  - **Provides warmth to birds in brooders.**
  - **Helps in sun drying poultry feeds.**
  - **Helps in drying the floor of the coop.**

46. The table below shows immunisable diseases, vaccines given and immunization sites. Study and complete it correctly.

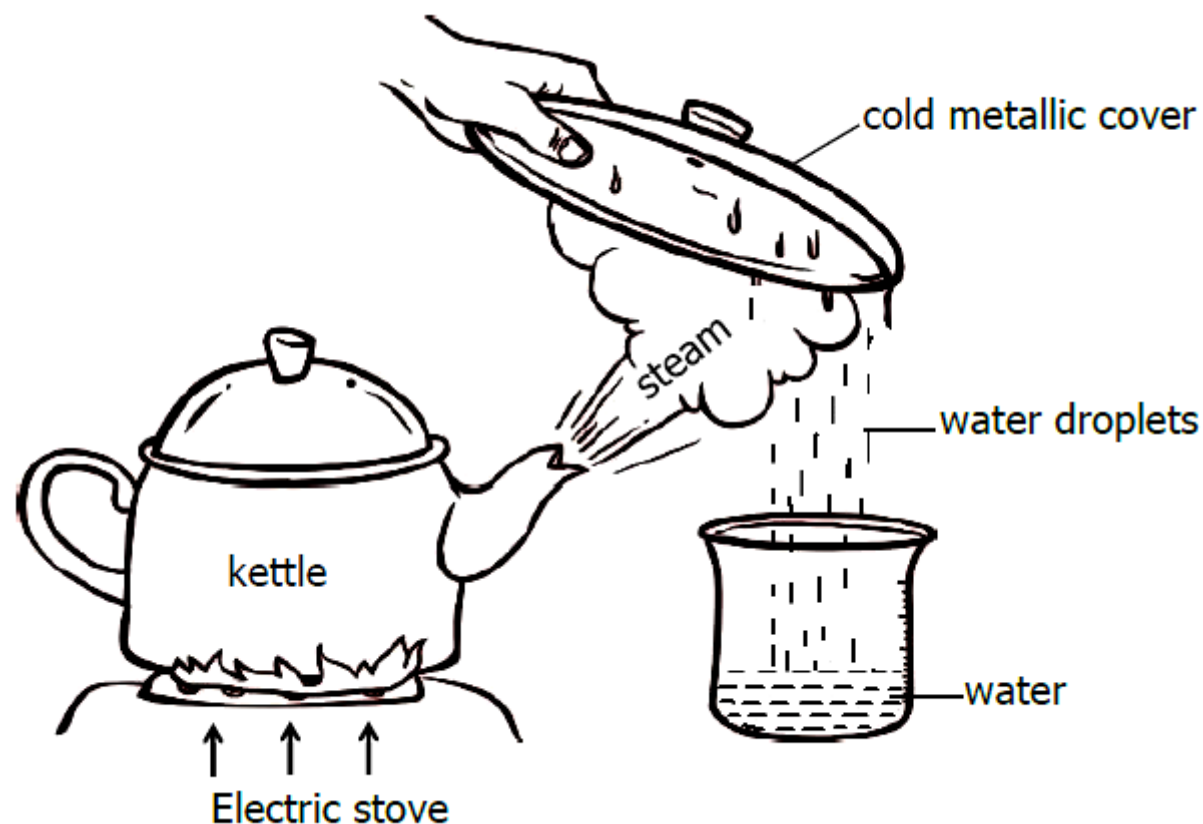
<b>Immunisable diseases</b>	<b>Vaccines</b>	<b>Immunisation site</b>
Tuberculosis	BCG vaccine	<b>Right upper arm</b>
<b>Diphtheria//Tetanus// Whoopig cough // Pertussis</b> <i>Reject: diphtheria / pertusis</i>	DPT vaccine	Left upper thigh
Poliomyelitis	<b>Polio vaccine</b> <i>Reject Polio alone</i>	Mouth
Measles	Measles vaccine	<b>Left upper arm</b>

47. a) Name the type of cattle that;
- Provide labour in the garden.
    - **Draught cattle / work type of cattle.** (*Reject: drought cattle*)
  - Promote the production of yoghurt.
    - **Dairy cattle.** (*Reject: diary cattle*)
- b) Give any **two** methods that a cattle farmer can apply to improve on the quality of the types of cattle above.
- **Cross breeding.**
  - **Castration.**
  - **Selective breeding.**
  - **Proper feeding.**
  - **Upgrading.**
  - **Deworming.**
  - **Regular vaccination.**



- **Controlling pests and diseases.**
- **Early treatment of diseases.**
- **Avoid practices that can harm the animals**

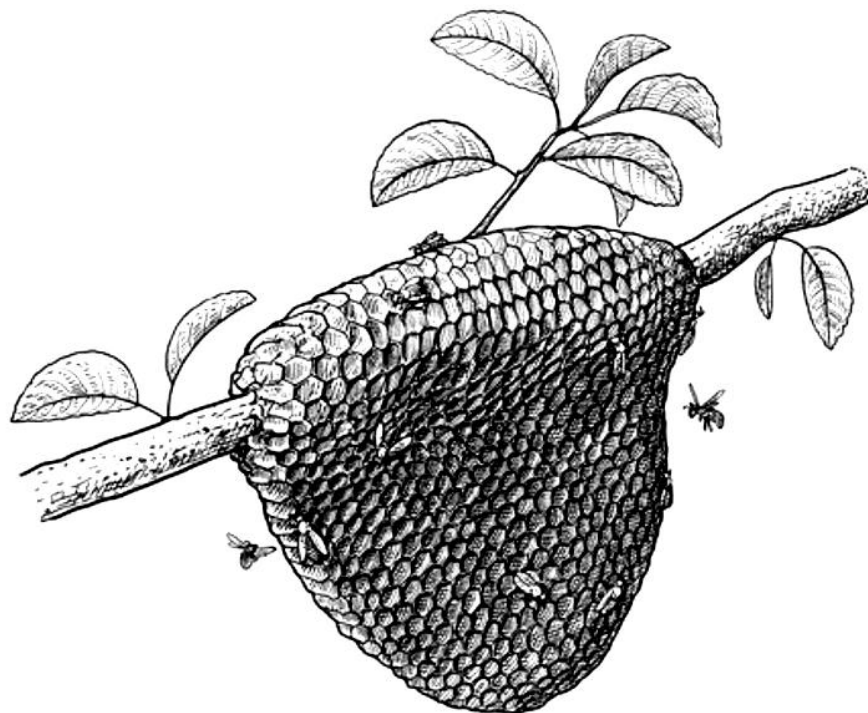
48. The diagram below shows an experiment carried out to demonstrate a process in nature. Study and use it to answer the questions that follow.



- a) Identify the process in nature demonstrated by the above experiment.  
 • **Water cycle / hydrological cycle // rain formation.**  
*Reject: Rain cycle / rainfall formation.*
- b) What does each of the following represent in the experiment above?
- Kettle  
 • **Water body.** (*Accept specific responses like lake, river, dam, ocean, sea*)
  - cold metallic cover.  
 • **Nimbus clouds / Clouds.**
- c) State the importance of the electric stove in the above experiment.  
 • **Provides heat that causes water in the kettle to evaporate.**
- 49 a) Name the type of teeth whose adaptation to its function is;
- Having sharp pointed crowns    **-Canine teeth / Canines.**
  - Having chisel shaped crowns    **-Incisor teeth / incisors.**
- b) Apart from having chisel shaped crowns, which other feature does the type of teeth in a ii) above have?
- **Have one root.**
  - **Have flat sloppy edges**
- c) Why is it not advisable to give young children too much biscuits to eat?
- **Too much biscuits attract bacteria that cause tooth decay.**
  - **Too much biscuits spoil teeth.** (*Reject: Too much sweets cause tooth // To prevent tooth decay / bacteria which cause tooth decay*)

- 50 a) Which condition in humans requires applying kiss of life as a way of giving first aid?
- **Near drowning.** (*Reject: Drowning*)
- b) Give any **two** causes of the above condition in humans.
- **Failure to swim.**
  - **Inability to swim.**
  - **Being drunk while in deep water.**
  - **Attack by a disease while swimming.**
  - **Muscle pull while in water.**
- c) State any **one** way of preventing the condition given in (a) above.
- **Acquiring swimming skills.**
  - **Putting on life jackets when travelling through water.**
  - **Closing or covering all septic tanks and deep pits having water.**
  - **Fencing water sources like wells, ponds and swimming pools.**

51. The diagram below shows structures built by honey bees. Study and use it to answer the questions that follow.

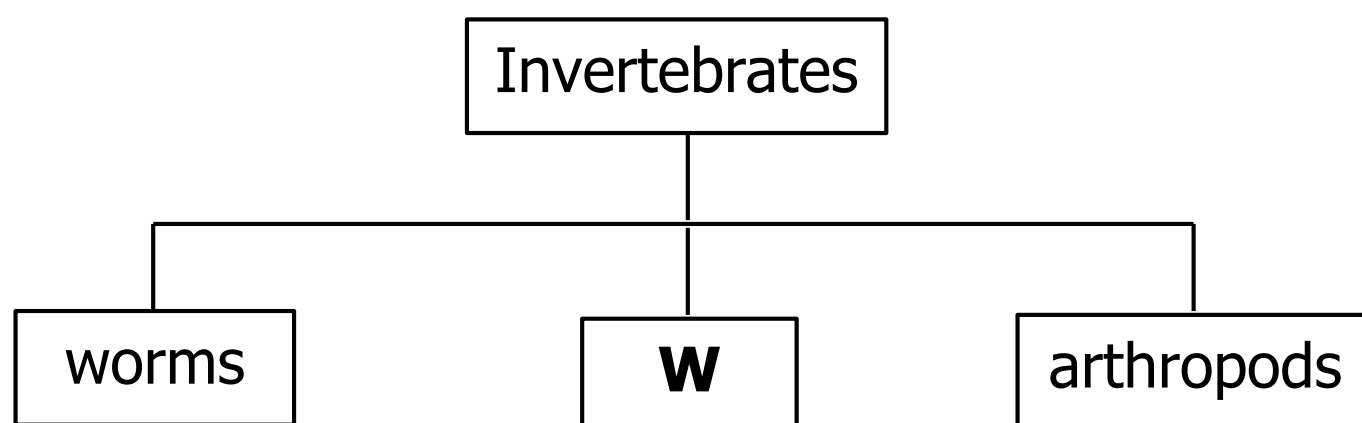


- a) Name the structures shown in the diagram above.
- **Honey combs.**
- b) How are the above structures useful to honey bees?
- **Used for storing honey.**
- c) What type of honey bees build the above structures in the hive?
- **Worker bees.**
- d) Apart from building above structures, state any **one** other role of the above type of honey bees in the hive.
- **They feed the queen, drone and grubs.**  
*Worker bees which feed the queen are called Nurse bees.*
  - **They guard the hive.**

- They collect nectar, pollen, propolis and water.
- They make honey.  
*Honey is made from water, nectar and pollen.*
- They clean the hive.
- They repair the hive.
- They build honey combs and brood combs.  
*They use wax to build honey combs.*
- They regulate temperature inside the hive by fanning the hive.
- They look for a new site.

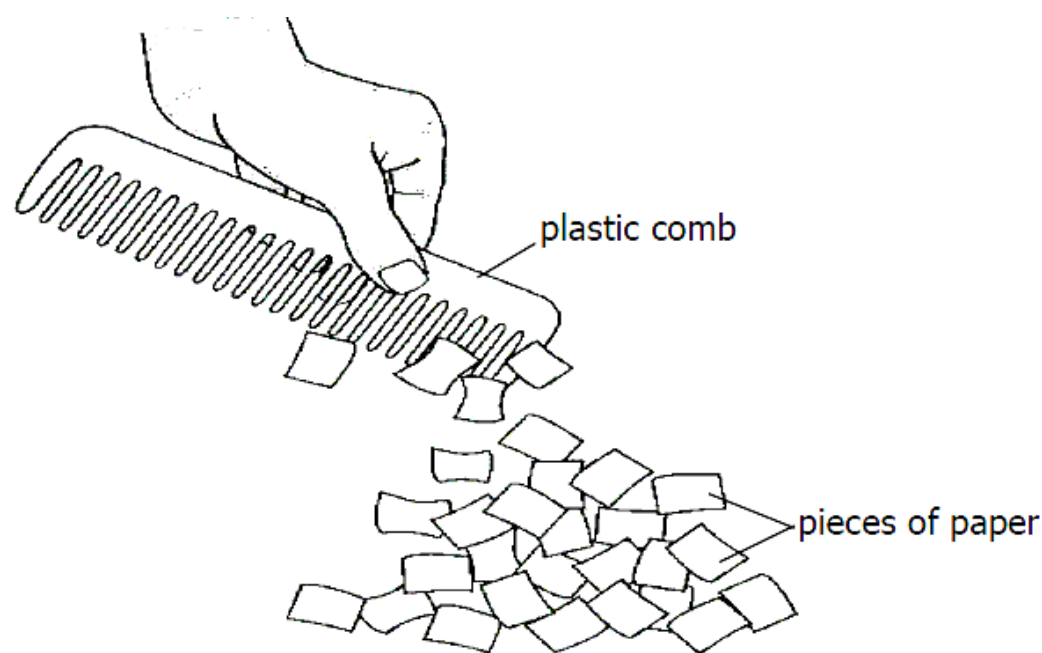
52. a) Give **two** factors that can make a panga to get a brownish coating.
- **Presence of water / Contact with water.**
  - **Presence of oxygen / Contact with oxygen.**
- b) State any **two** effects of the brownish coating to a panga.
- **Makes a panga blunt.**
  - **Changes and spoils the colour of the panga.**
  - **Makes the panga weak.**
  - **Reduces the efficiency of panga.**

53. The table below shows classes of invertebrates. Study and use it to answer the questions that follow.



- a) Name the class of invertebrates represented by **W**.
- **Molluscs.**
- b) State any **one** similarity between invertebrates at **W** and worms.
- **Both have soft bodies.**
  - **Both have no backbone.**
  - **Both have hydrostatic skeleton.**
  - **Both lay eggs.** (*Reject: Both have unsegmented bodies*)
- c) Mention any **one** organism that can be put at **W**.
- **Snail // slug // octopus // mussel // clam // oyster // squid**
  - **Cuttlefish.**
- d) Identify the class of invertebrates from the table above to which a termite belongs.
- **arthropods** (*Reject insects*)

54. In the diagram below, a plastic comb was rubbed against a woollen cloth and brought nearer to the pieces of paper. Study and use it to answer the questions that follow.



- a) Identify the type of electricity demonstrated using the above experiment.  
• **Static electricity.**
- b) What type of charge is possessed by;
- i) Pieces of paper - **Positive charge / protons.**
- ii) Plastic comb - **Negative charge / electrons.**
- c) Why is the plastic comb able to attract pieces of paper as shown above?  
• **Has been statically charged. // Has acquired static charges.**  
• **Has acquired static electricity // Due to static electricity.**
55. a) Name the deficiency disease which results from lack of iodine in humans.  
• **goiter.** (*Accept: goiter*)
- b) State the commonest sign of the above deficiency disease in humans.  
• **Swelling of the neck / Swollen neck.**
- c) Give any **two** examples of food which give us iodine.
- |                        |                                  |
|------------------------|----------------------------------|
| • <b>Onions.</b>       | • <b>Shrimps</b>                 |
| • <b>Iodised salt.</b> | • <b>Oyster.</b>                 |
| • <b>Seaweed.</b>      | • <b>Cray fish</b>               |
| • <b>Lobsters.</b>     | • <b>Green leafy vegetables.</b> |

### **ADVICE TO TEACHERS OF INTEGRATED SCIENCE**

- Revise each question in this paper extensively with the candidates.
- Ensure that your candidates write P.4 to P.6 Surekey Integrated Science papers alongside P.7 sets. To enable them recall concepts from the previous classes.
- Encourage candidates to read the questions twice and identify the key words in the question. Let them underline the key words using a pencil.

**\*\*\*\*\*Best of Wishes\*\*\*\*\***