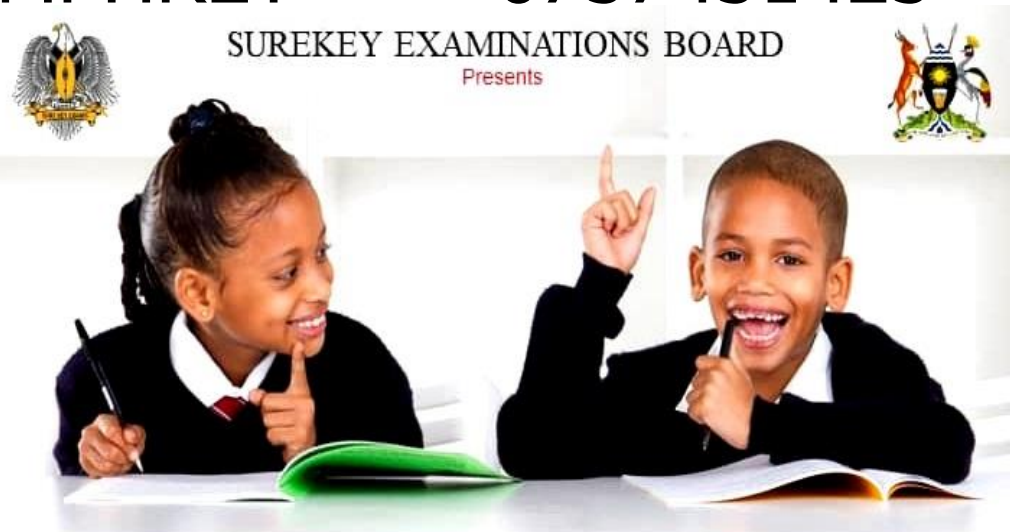
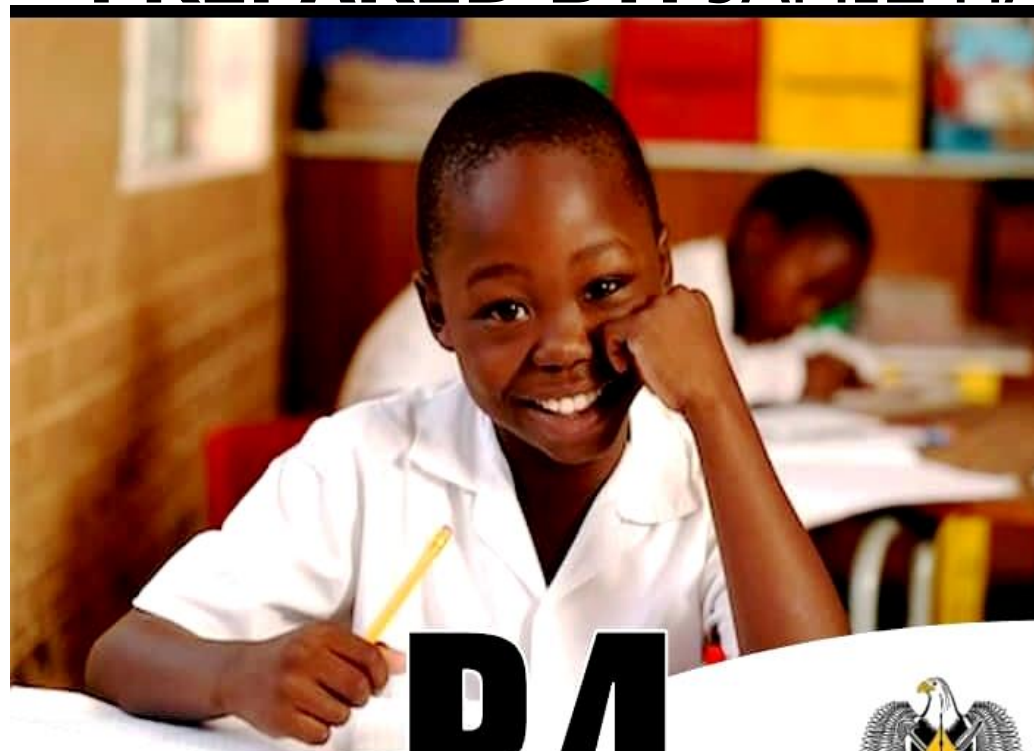




SUREKEY EXAMINATIONS BOARD
PRIMARY SIX QUALITY CHECK III
2023
INTEGRATED SCIENCE
OFFICIAL MARKING GUIDE

PREPARED BY: JAMIE HAMPHREY

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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

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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 16th October 2023.

THEME: "Preparing quality learners for Upper Primary"

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

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SECTION A: 40 MARKS

1. Which type of soil has smooth and fine particles?
 - **Clay soil/clay**
2. Name the state of matter which has compact molecules.
 - **Solids // solid state// solid**
3. How is a cobra similar to a newt in terms of body temperature?
 - **Both a cobra and a newt are cold blooded.**
 - **In both, the body temperature changes according to that of the surrounding.**
4. State any **one** way of controlling scabies among children.
 - **Avoid body contact with an infected person.**
 - **Avoid sharing clothes, towels, combs and beddings.**
 - **Bathing regularly.**
 - **Early treatment in case scabies outbreaks.**
 - **Ironing clothes.**

The diagram below shows a crop growing practice. Use it to answer Questions 5 and 6.



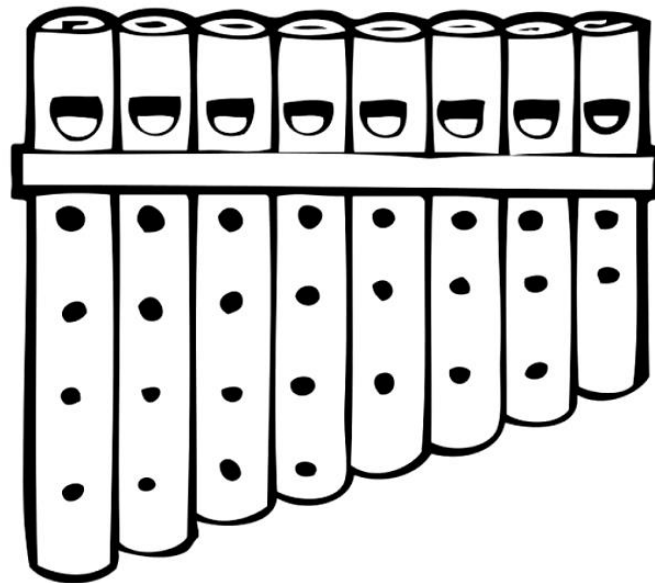
5. Name the substance marked **K**.
 - **Mulch / mulches** (*Reject mulching*)
6. State any **one** way in which substance marked **K** can be dangerous to a crop farmer.
 - **Fire hazard**
 - **Can grow into weeds.**
 - **Hide crop pests like termites.**

7. Give any **one** way in which fractures affect a casualty.
 - **Lead to lameness**
 - **Cause a lot of pain**
 - **Can lead to loss of some body parts**
 - **Retard work for the casualty.**
8. Give any **one** breed of chicken that is useful to meat processing industries.
 - **Black Australorp**
 - **Cornish white**
 - **New Hampshire**
 - **Jersey white giant**
 - **Orpington**
 - **Rhode Island**
9. Which food nutrient is needed to prevent pellagra among children?
 - **Vitamin B3**
10. State any **one** way of controlling the breeding of lice.
 - **Trimming off long air.**
 - **Bathing regularly**
 - **Wash clothes regularly**
 - **Spread beddings in sunshine**
 - **Practice proper personal hygiene**
 - **Cleaning and combing hair with clean combs**
 - **Avoid sharing clothes with people who have lice.**
 - **Ironing clothes**
 - **Combing hair every day**
11. Name the human body organ that uses sound for it to function.
 - **The human ear / The ear / Ear**
12. Give any **one** way of protecting honey bees from hive beetles.
 - **Ensure the presence of water.**
 - **Ensure the presence of flowering plants.**
 - **Protect bees from pests.**
 - **Provide quiet and cool environment.**
 - **Keep the brood untouched**
 - **Place the beehives in dry places.**
13. Name the vaccine given to babies at birth through injection.
 - **Polio vaccine**
14. State any **one** factor that reduces the rate of transpiration.
 - **High humidity**
 - **Low speed of wind**
 - **Small surface area of the leaves.**
 - **Low temperature**
 - **Low water supply in plants**
15. Which method of making alcohol involves the use of yeast?
 - **Fermentation of alcohol/ fermentation method.**
 - **Fermentation**

16. What good health habit would you use to remove and kill harmful bacteria on hands after visiting a latrine?
- **Washing hands with clean water and soap.**
 - **Washing hands.**
 - **Sanitizing hands.**
17. Name any one group of worms that have un-segmented bodies.
- **Roundworms/nematodes**
18. How is sun drying helpful in the preservation of food crops?
- **Sun heat dehydrates food crops.**
 - **Heat from the sun drains moisture from the food crops.**
19. Give any **one** measure that can protect water contamination from water sources.
- **Fencing water sources to avoid contamination**
 - **Avoid washing cars in/near water bodies**
 - **Ensuring proper disposal management of domestic wastes**
 - **Avoid discharging industrial wastes in water bodies**
 - **Avoid using poison/chemicals for fishing.**
20. Name the mineral salt that helps in the formation of red blood cells in the human body.
- **Iron**
21. State any **one** danger of heat in the environment.
- **Too much heat causes drought and famine**
 - **Too much heat causes death of some organisms.**
 - **Too much heat causes water sources to dry up.**
 - **Heat from burning leads to destruction of people's property.**
 - **Too much heat causes discomfort to people.**
 - **Too much heat destroys crops in the garden.**
 - **Too much heat causes fading of plastics.**
 - **Too much heat makes the soil hard to cultivate.**
22. Give any **one** factor that leads to the outbreak of snuffles in rabbits.
- **Poor feeding**
 - **Feeding rabbits on contaminated foods**
 - **Giving rabbits contaminated water.**
 - **Keeping rabbits in dirty hutches.**
 - **Presence of parasites in the hutch.**

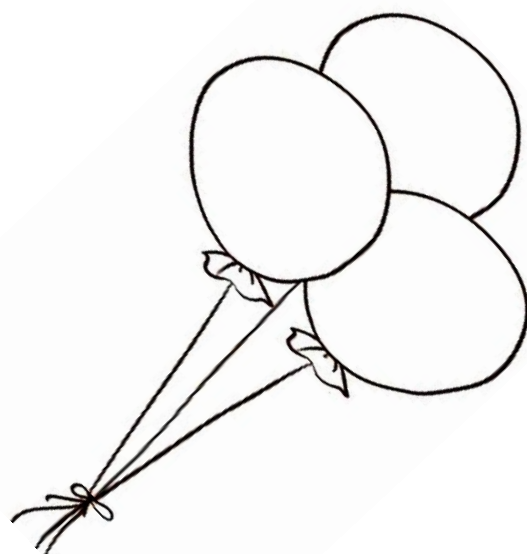
23. Give any **one** way of caring for elderly people at home.
- **Proper feeding**
 - **Washing their clothes and bedding**
 - **Treating them when they are sick.**
 - **Doing for them some domestic work.**
 - **Bathing those who are unable.**

The diagram below shows a musical device. Use it to answer questions **24** and **25**.



24. To which group of musical instruments does the above device belong?
- **Wind musical instrument**
25. How can pitch of the above musical device be increased?
- **By reducing their length.**
26. Why is decanted water not good for drinking?
- **It contains germs.**
27. How does a coin behave when dropped in water?
- **Sinks**
28. State any **one** factor that favours the breeding of bacteria.
- **Presence of warmth// food//moisture//air**
29. State any **one** piece of advice you would give to a person who suffers from constipation.
- **Feed on food rich in roughages**
 - **Have regular meals**
 - **Drink enough water**

The diagram below shows balloons flying in air. Use it to answer questions **30** and **31**.



30. Which property of air enables the balloons above to fly in air?
- **Air exerts pressure // Air moves things.**
31. State what happens to the balloons above when they are heated by sunshine as they fly.
- **The balloons expand**
 - **The balloons burst/explode**
32. Which disease is spread to humans by rat fleas?
- **Bubonic plague**
33. State any **one** way in which saliva is important during digestion.
- **Lubricates food for easy feeding.**
 - **Moistens and softens food.**
 - **Binds food**
 - **Helps in digestion of starch.**
 - **Contains salivary amylase that acts on cooked starch.**
34. Give any **one** way of controlling cholera in the community.
- **Washing hands before eating food.**
 - **Reheat all cold food before eating.**
 - **Cover leftover food in clean containers.**
 - **Give a lot to ORS to the victim to prevent dehydration.**
 - **Through immunization using Cholera vaccine**
 - **Take the infected person to the hospital as soon as possible.**
 - **Isolate the sick person from the healthy ones.**
 - **Kill houseflies by spraying with insecticides.**
 - **Proper disposal of rubbish.**
 - **Use latrines to dispose faeces.**
 - **Wash hands after using the latrine**
 - **Observe good food hygiene.**
 - **Boil water for drinking**

35. Give any **one** reason why water is not used in thermometers.
- **Wets the glass tube**
 - **Needs a lot of heat to expand.**
 - **Has no uniform expansion**
 - **Water is not easily seen.**
36. State any **one** method used to control squirrels in the garden.
- **Setting mousetraps /trapping**
 - **Fencing the garden**
 - **Practising crop rotation**
 - **Use of scare crows**
37. State any **one** factor that leads to breaking down of rocks in the environment.
- **Change in temperature**
 - **Movement of ice**
 - **Human activities like quarrying.**
 - **Flowing water**
 - **Action of plant roots**
- (Reject action of bacteria and fungi)*
38. Name the form of mechanical energy possessed by waterfalls.
- **Kinetic energy**
39. How are crutches useful when giving first aid?
- **Give support to a casualty with a fractured leg in walking.**
40. Give any **one** function of blood in the human body.
- **Transports materials in the body.**
 - **Distributes heat in the body.**
 - **Protects the body against germs.**

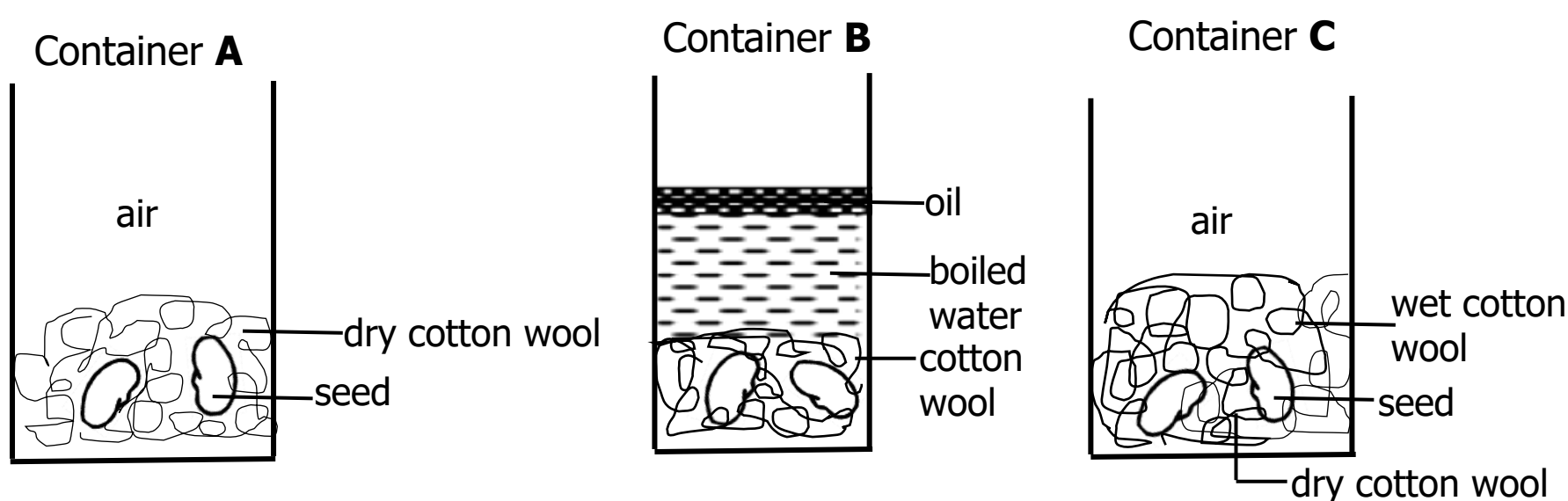
SECTION B: 60 MARKS

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

41. a) Name any **two** breeds of chicken kept for egg production.
- **White leghorn**
 - **Brown egger**
 - **Ancona**
 - **Minorca**
 - **Sykes**
- b) State any **two** advantages of keeping poultry over goats.
- **Poultry multiply faster than goats.**
 - **Poultry grow and mature faster than goats.**
 - **Poultry need smaller space than goats.**
 - **Poultry are cheaper to buy than goats.**
 - **Poultry provide a quicker source of income turnover than goats.**

42. a) Mention any **two** examples of organic manure.
- **Green manure**
 - **Farmyard manure**
 - **Compost manure**
 - **Organic mulches.**
- b) State any **two** methods of applying fertilizers in the garden.
- **Top dressing**
 - **Placement**
 - **Spraying**
 - **Casting**
 - **Broadcasting**

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

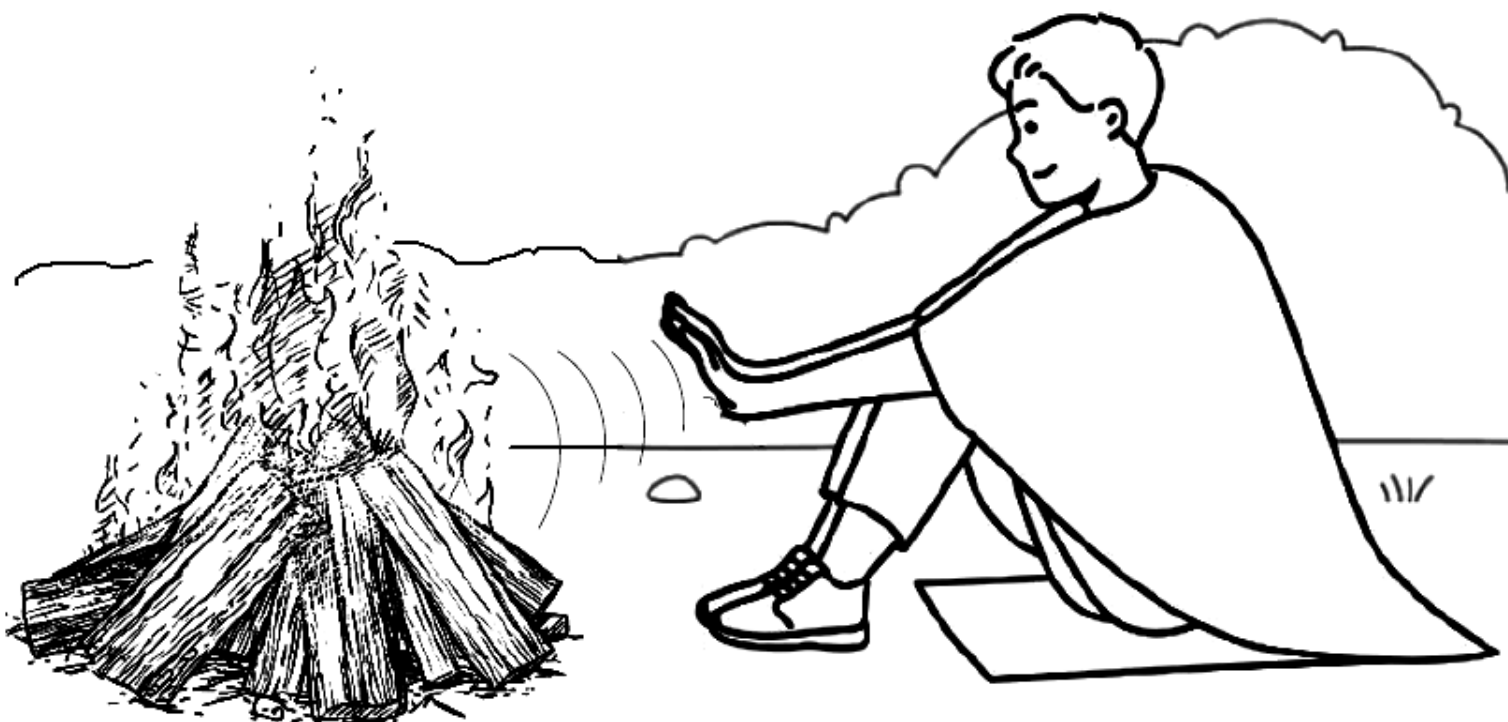


- a) In which of the containers will the seeds germinate after some days?
- **Container C // C**
- b) Why would the seeds in the container you have identified germinate?
- **Presence of all necessary conditions for germination of seeds.**
- c) Give **one** effect of oil on the seeds in container **B**.
- **Blocks oxygen supply to the seed.**
 - **Makes seeds fail to germinate.**
 - **Causes seed dormancy.**
- d) State the role of the condition which is absent in container **A** during germination.
- **Dissolves food for the embryo**
 - **Softens the testa/seed coat.**
44. a) What type of change is burning?
- **Chemical change**
- b) State any **one** condition necessary for burning to take place.
- **Presence of oxygen**
 - **Presence of fuel**
 - **Presence of heat.**

- c) Mention any **two** other changes that are similar to burning.
- **Fermentation**
 - **Decomposition**
 - **Weathering**
 - **Respiration**
 - **Photosynthesis**
 - **Digestion**
 - **rusting**

45. a) To which class of arthropods do the following insects belong?
- i) Spider – **arachnids / arachnada.**
 - ii) housefly - **insects**
- b) Give any **two** reasons why spiders and houseflies do not belong to the same class of arthropods.
- **Spiders have two main body divisions while houseflies have three main body divisions.**
 - **Spiders breathe through lung books while houseflies breathe through spiracles.**
 - **Spiders have four pairs of jointed legs while insects have three pairs of jointed legs.**

46. The diagram below shows a method of heat transfer. Study and use it to answer the questions that follow.



- a) Identify the method of heat transfer shown above.
- **Radiation**
 - **Heat transfer by radiation**
- b) Name any **one** medium through which the method of heat transfer above takes place.
- **Space //vacuum**

- c) Give any **two** ways in which the method of heat transfer above is important to people.
- **Helps in drying harvested crops.**
 - **Helps in preserving food by sun-drying.**
 - **Helps in rain formation.**
 - **Helps in drying clothes and beddings.**
 - **Helps in roasting meat, maize, fish or chicken.**
 - **Enables people to warm themselves.**

47. In the table below, part **A** shows animals and part **B** shows their breathing organs.

Part A : Animals	Part B : Breathing organs
Toad	Gills
Cricket	Moist skin
Earthworm	Spiracles
Mud fish	Lungs

Match correctly the animal in list **A** to its breathing organ in list **B**.

- i) Toad **lungs**
 ii) Cricket **spiracles**
 iii) Earthworm **moist skin**
 iv) Mud fish **gills**

48. a) Which communicable disease attacks both rabbits and human beings
- **Pneumonia**
- b) State any **two** signs of the disease named in a) above.
- **Shivering**
 - **Loss of appetite**
 - **Difficulty in breathing**
 - **The rabbits may die suddenly**
 - **High temperature**
- c) Give any **one** way of controlling the communicable disease named in a) above among rabbits.
- **Keep the hutch clean and dry**
 - **Isolate sick rabbits**
 - **Ensure proper ventilation**
 - **Keep rabbits away from rain and wet places.(away from coldness)**
 - **Treat with drugs.**

49. a) Name the force that brings down all objects thrown up.
- **Gravity**
 - **Gravitational force**
 - **Force of gravity**
- b) When a piece of polythene and a pencil are dropped from the same height, which one reaches the ground first?
- **Pencil**
- c) Give a reason for your answer in b) above.
- **A pencil has less air resistance.**
- d) Why do some objects sink in water?
- **They are denser than water.**

50. The diagram below shows substances commonly used by some people in the community. Study and use it to answer the questions that follow.



- a) Name the habit that involves the use of the substances shown above.
- **Smoking**
 - **Tobacco smoking**
- b) Which body organ is greatly affected by the habit named in a) above?
- **lungs**
- c) Mention any **one** disease that is worsened when a person uses the substances shown above.
- **Tuberculosis**
 - **Pneumonia**
 - **Asthma**
 - **Bronchitis**
- (Reject lung cancer// emphysema)
- d) State any **one** danger of the habit named in a) above to a pregnant mother.
- **Leads to miscarriages**
 - **Leads to birth of underweight baby**
 - **Leads to still birth**
 - **Leads to premature birth.**

51. a) In which way do people get tape worm infestations?
• **Eating undercooked meat**
- b) What do tape worm feed on in the human body?
• **Digested food** (*Reject food alone*)
- c) State the function of each of the following parts to a tape worm;
i) suckers – **For attachment on the walls.** (*Reject for sucking digested food*)
ii) segments – **To store eggs**
52. a) Give the main function of the heart in the human body.
• **To pump blood to all parts of the body.**
- b) To which body system does the heart belong?
• **Circulatory system**
- c) State any **two** health habits that keep the body system above in the normal working condition.
• **Feed on a balanced diet**
• **Do regular physical exercise**
• **Avoid smoking**
• **Go for regular medical checkups**
• **Limit oily or fatty food**
53. a) Give any **two** similarities between bacteria and fungi.
• **Both decompose organic matters**
• **Both cause fermentation**
• **Both can cause diseases.**
- b) State any **two** differences between bacteria and fungi.
• **Fungi reproduce by means of spores or budding while bacteria reproduce by binary fission.**
• **All bacteria are single celled while most fungi have many cells. (multicellular)**
• **All bacteria are microscopic while most fungi can be physically seen.**
• **Bacteria reproduce faster than fungi.**
• **Some bacteria make their own food while all fungi absorb food from decayed matter.**
• **No bacteria are eaten while some fungi are eaten.**

54. The diagram below shows a farm practice done in sheep keeping.
Study and use it to answer the questions that follow.



- a) Identify the farm practice shown in the diagram above.
- **Sheep shearing**
 - **Shearing**
- b) In which season is the above farm practice done?
- **Summer**
 - **Dry season**
- c) Why is the farm practice done in the season you have given in (b) above?
- **To protect the sheep against coldness at night.**
 - **To ensure that hair grows again before winter.**
 - **There is enough warmth to protect the sheep from coldness.**
- d) Mention the product obtained from the farm practice shown in the diagram above.
- **Wool**
 - **Fleece**

55. a) Which deficiency disease is known as starvation?
- **Marasmus**
- b) State the major cause of the above deficiency disease.
- **Nutrient deficiency**
 - **Lack of all food values in the body**
 - **Lack of a balanced diet.**
- (Reject lack of carbohydrates)*
- c) Give any **two** signs of the above deficiency disease.
- **The eyes are very bright**
 - **The face looks like that of an old person.**
 - **The child becomes very thin and underweight.**
 - **Lower part of the abdomen gets swollen.**

END

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