



SUREKEY EXAMINATIONS BOARD

PRIMARY SEVEN PLACEMENT

2023

INTEGRATED SCIENCE

MARKING GUIDE

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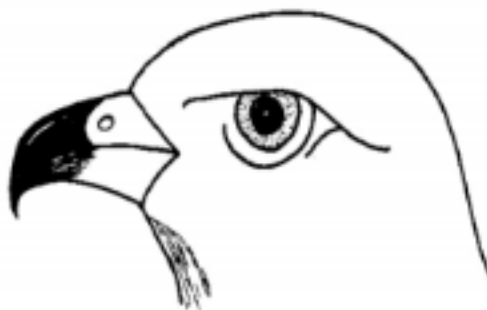
“Don’t speak for Quality, Let the Quality Speak for itself”

SECTION A: 40 MARKS

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

1. Name the gas used by leguminous plants to make proteins.
✓ **Nitrogen**
2. State the vector that spreads elephantiasis to people.
✓ **Culex mosquito (Reject mosquito alone)**
3. Which condition is caused by foreign bodies in the throat?
✓ **Choking (Reject choking)**
4. Name the group of crops that provide single harvests.
✓ **Annual crops**
5. State any **one** way of controlling the spread of scabies among children.
✓ **Regular bathing / Washing clothes regularly/ Ironing clothes to kill itch mites / Avoid sharing clothes, basins and towels**

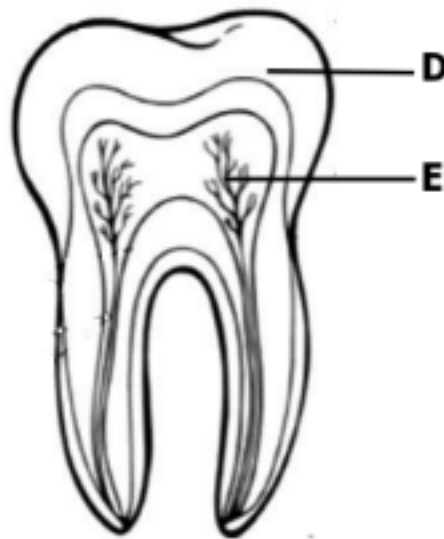
The diagram below is of a beak of a certain group of birds. Study and use it to answer question 6 and 7.



6. Which group of birds have the above beak?
✓ **Scavenger birds**
7. How are birds with such a beak dangerous to a poultry farmer?
✓ **They kill and eat chicks (Reject they kill and eat poultry)**
8. Which type of manure is got from animal droppings?
✓ **Farmyard manure (Reject compost manure / natural manure)**
9. Give any **one** role played by school children in promoting PIASCY Messages.
✓ **Design posters with PIASCY messages / educating fellow pupils about body changes at puberty / singing songs about PIASCY messages / Reciting poems about PIASCY messages / Dramatising about PIASCY messages**

10. Apart from hearing, in which other way is the ear useful to a person?
✓ **For body balance (Reject for decoration / beauty)**
11. State any **one** way in which propolis is important to worker bees.
✓ **For repairing the hive**
✓ **For smoothing the hive**
✓ **For waterproofing the hive**
✓ **For trapping dust and germs**
12. Which process in plants is similar to sweating in human beings?
✓ **Transpiration**

The diagram below shows a molar tooth. Use it to answer questions **13** and **14**.



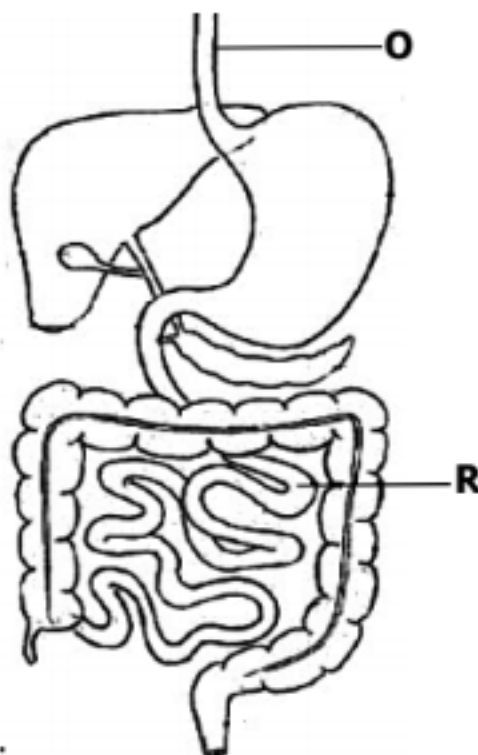
13. Name the part labelled **D**.
✓ **Dentine (Reject enamel)**
14. Give the function of part marked **E** to the tooth.
✓ **Supplies nutrients to the tooth**
✓ **Supplies oxygen to the tooth**
15. How is a strip cup useful to cattle farmer?
✓ **It is used to detect the presence of mastitis in milk**
16. Give **one** way of improving immunity in children.
✓ **Feeding them on a balanced diet**
✓ **Prolonged breastfeeding babies**
✓ **Taking babies for immunization**
✓ **Providing enough food to babies**
17. State any **one** danger of buying drugs from local shops.
✓ **One may buy expired drugs**
✓ **One may buy contaminated drugs**
✓ **The drugs may not be properly prescribed**
✓ **The drugs may be poorly stored**

18. What type of weather is suitable during planting crops?
✓ **Rainy weather (Reject rainy season)**
19. Give any **one** natural factor that degrades the environment.
✓ **Floods**
✓ **Landslides / Lightning / drought / earthquakes**
20. Apart from eating food rich in iron, state any **one** other way of increasing the volume of blood in the body.
✓ **Through blood transfusion**
✓ **Taking iron supplement tablets**
✓ **Taking plenty of fruit juice and water regularly (Reject feeding on a balanced diet)**
21. Which part of the fish is used for detecting sound waves in water?
✓ **Lateral line**
22. State any **one** characteristic that shows that a grasshopper is an arthropod.
✓ **Has jointed legs / has a segmented body / Has exoskeleton.**
23. Which breed of goats is mainly kept for mohair production?
✓ **Angora goats**
24. Give any **one** condition that can lead to bottle feeding.
✓ **When the mother is HIV positive (has Aids)**
✓ **When the mother dies**
✓ **When the mother is very sick**
✓ **When the mother has breast cancer**
25. State any **one** way in which heat transfer by convection is useful to people.
✓ **Helps in boiling water**
✓ **Rain formation**
✓ **Removes bad smell from latrines**
✓ **Drives smoke from the kitchen**
26. Name the deficiency disease that causes gums to bleed.
✓ **Scurvy**
27. Give any **one** way in which polythene bags cause soil exhaustion.
✓ **They prevent water from entering the soil**
✓ **They limit soil aeration.**
✓ **They kill soil organisms**

28. State any **one** way in which doing regular physical exercises is important in the body.

- ✓ **Physical exercises increase body flexibility**
- ✓ **Regular exercises reduce the level of fats in the body**
- ✓ **Reduce body weight**

The diagram below shows part of the digestive system. Study and use it to answer questions **29** and **30**.



29. Name the part marked **O**.
✓ **Gullet / Oesophagus / Esophagus**
30. State any **one** way in which part marked R is able to absorb digested food.
✓ **It has villi**
✓ **It is coiled**
✓ **It is long**
✓ **It has narrow lumens**
✓ **It has a dense network of blood capillaries**
31. Why is water called matter?
✓ **Has mass**
✓ **Has volume**
✓ **Occupies space**
(Reject has weight)
32. Which system of keeping poultry does not restrict the movement of birds?
✓ **Free range system**
✓ **Open range system**
33. What form of energy enables the eyes to function?
✓ **Light energy**

34. Give any **one** way in which seed dispersal is important in the environment.
- ✓ **Enables plants to colonise new areas**
 - ✓ **Prevents overcrowding of plants**
 - ✓ **Prevents plant extinction**
35. Give any **one** reason why animals move from one place to another.
- ✓ **To look for food**
 - ✓ **To look for shelter**
 - ✓ **To look for young ones**
 - ✓ **To look for mates**
 - ✓ **To look for protection**

The diagram below shows an intestinal worm. Use it to answer questions **37** and **38**.



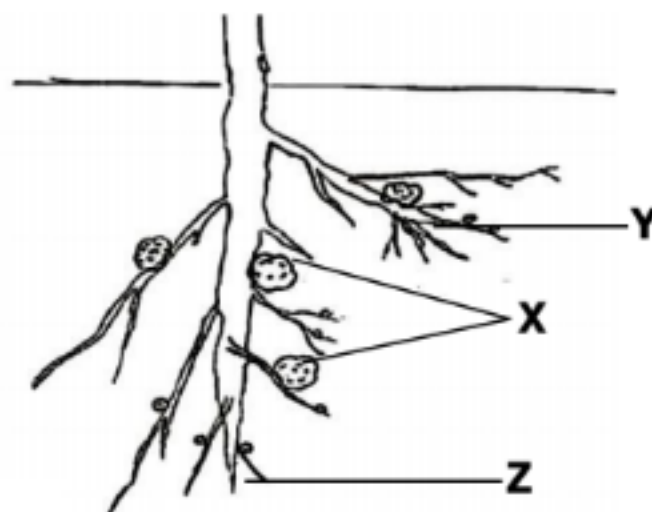
36. Identify the intestinal worm shown in the diagram above.
- ✓ **Hook worm**
37. How is the feeding of the above worm different from that of a tapeworm?
- ✓ **The above worm feed on blood while tapeworm feeds on digested food**
38. State any **one** factor to consider when sorting clothes for washing.
- ✓ **Colour of clothes / Level of dirt / Texture of clothes**
39. Name any **one** bacterial disease that spreads through drinking contaminated water.
- ✓ **Tuberculosis**
40. Give any **one** life skill that safeguards school children against smoking.
- ✓ **Peer resistance**
 - ✓ **Self-awareness**
 - ✓ **Coping with stress**
 - ✓ **Critical thinking**
 - ✓ **Decision making**

SECTION B: 60 MARKS

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

41. a) State any **two** ways in which vectors spread germs.
- ✓ **Through contaminating food**
 - ✓ **Through bites**
 - ✓ **Through use of their hairy body**
 - ✓ **Through vomiting on food**
 - ✓ **Through spitting on food**
 - ✓ **Through landing on food**
- b) Give any **two** ways of controlling insect vectors.
- ✓ **Drain stagnant water around the home to control malaria**
 - ✓ **Spraying insecticides in our rooms kills most insect vectors**
 - ✓ **Clear bushes near homes**
 - ✓ **Proper disposal of faeces in latrines**
42. a) Give any **two** elements of Primary Health Care (PHC).
- ✓ **Water and sanitation**
 - ✓ **Immunisation**
 - ✓ **Community health education**
 - ✓ **Family planning**
 - ✓ **Personal hygiene**
 - ✓ **Accidents and first aid**
 - ✓ **Food hygiene and nutrition**
- b) State any **two** principles of Primary Health Care (PHC).
- ✓ **Total health for people**
 - ✓ **Equal care for everyone**
 - ✓ **Community participation**
 - ✓ **Equitable health services**
 - ✓ **Starting with most urgent**
 - ✓ **Social acceptability**
 - ✓ **Affordable PHC services**

43. The diagram below is of the root system. Study and use it to answer the questions that follow.



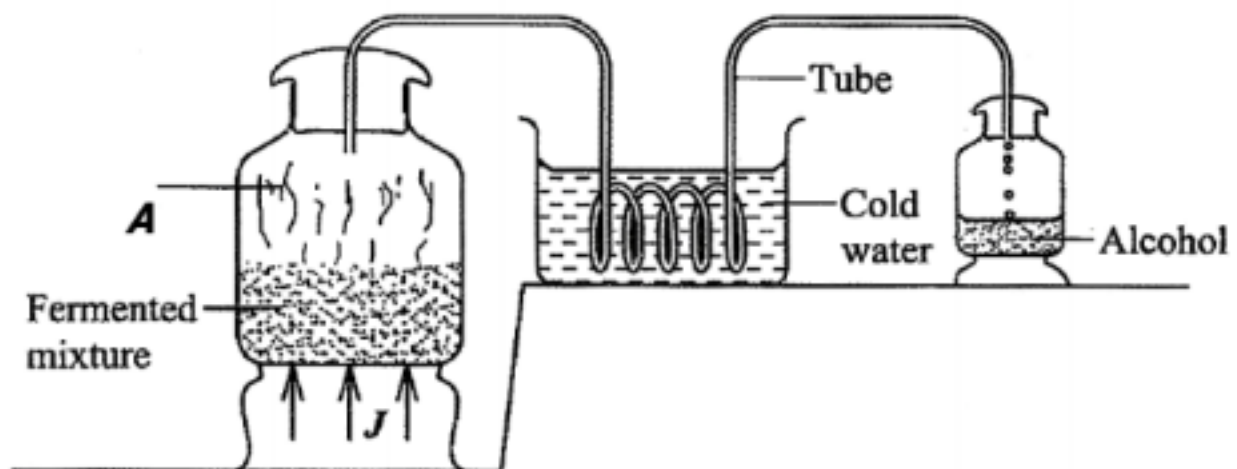
- a) Name the part marked **Z**.
✓ **Root cap**
 - b) Give the function of part marked **Y** to a plant.
✓ **Absorbs water and mineral salts from the soil for the plants**
 - c) Write down any **one** plant that has part marked **X** on its roots.
✓ **Beans / ground nuts / soya beans / French beans/ peas.**
(Reject sim sim)
 - d) What type of root system is shown above?
✓ **Taproot system**
44. a) What type of changes form new permanent substances?
✓ **Chemical changes**
- b) Give any **one** characteristic of such changes.
✓ **Irreversible**
✓ **The weight of an object changes**
 - c) Mention any **two** examples of such changes.
✓ **Burning / fermentation / rusting / decomposition / respiration**
45. In the table below, part **A** shows terms commonly used in measurement and part **B** shows their meaning.

Part A : Terms.	Part B : Meanings
Mass	Force of gravity acting on an object
Volume	Mass per unit volume of a substance
Density	Quantity of matter an object contains
Weight	Amount of space an object occupies

Match correctly the terms with their meanings in the spaces provided below.

- | | | |
|------|---------|--|
| i) | Mass | Quantity of matter an object contains |
| ii) | Volume | Amount of space an object occupies |
| iii) | Density | Mass per unit volume of a substance |
| iv) | Weight | Force of gravity acting on an object |

46. a) Write down any **two** things that happen to air in the nose during inhalation.
✓ Air is warmed / moistened / filtered / cleaned
- b) How are the following parts important to the trachea?
 i) epiglottis. **Closes the trachea during swallowing.**
 ii) rings of cartilage. **Keep the trachea open all the time.**
47. The diagram below shows a method of obtaining pure alcohol. Study carefully and use it to answer the questions that follow.



- a) Identify the method of making alcohol shown in the diagram above.
✓ Distillation
- b) Name the physical process that takes place at **A**.
✓ Evaporation (Reject evaporation)
- c) State the importance of cold water in the above method of making alcohol.
✓ To cool and condense alcohol vapour (Reject To cool the vapour)
- d) Give the reason why the delivery tube is coiled as shown in the diagram above.
✓ To increase the surface area for condensation of alcohol vapour

48. a) Give the meaning of the term steaming up.
 ✓ **The feeding of a pregnant animal on highly nutritious diet before delivery**
- b) Identify the class of food used for steaming up cows.
 ✓ **Proteins**
- c) State any **two** advantages of steaming up a cow before calving.
 ✓ **Stimulates milk production and letdown**
 ✓ **Prepares the body of an in – calf for calving**
49. a) Apart from raising the hutch above the ground, write down any **two** other qualities of a good hutch.
 ✓ **Should be leak proof**
 ✓ **Should have a well cemented floor**
 ✓ **Should be built using a wire mesh**
 ✓ **Should be strong enough (Reject should be clean / should be kept dry)**
- b) Why should the rabbit hutch be raised above the ground?
 ✓ **To prevent predators from attacking rabbits**
 ✓ **To prevent dampness in the hutch**
- c) State any **one** way of controlling diseases in rabbits.
 ✓ **Regular sweeping of the hutch**
 ✓ **Cleaning feeding equipment**
 ✓ **Regular vaccination**
 ✓ **Proper feeding of rabbits**
 ✓ **Providing clean feeds**
50. a) Give the meaning of the following terms.
- i) Puberty
 ✓ **Puberty is the period of sexual maturity of a person**
- ii) Adolescence
 ✓ **Adolescence is the traditional period between childhood and adulthood**
- b) State any **two** secondary sex changes in male adolescents.
 ✓ **Growth of pubic hair and beards**
 ✓ **Sweat glands become more active**
 ✓ **The body becomes more muscular**
 ✓ **The voice breaks and deepens**

51. The diagram below shows a structure that is commonly put in the garden by crop farmers. Study and use it to answer the questions that follow.

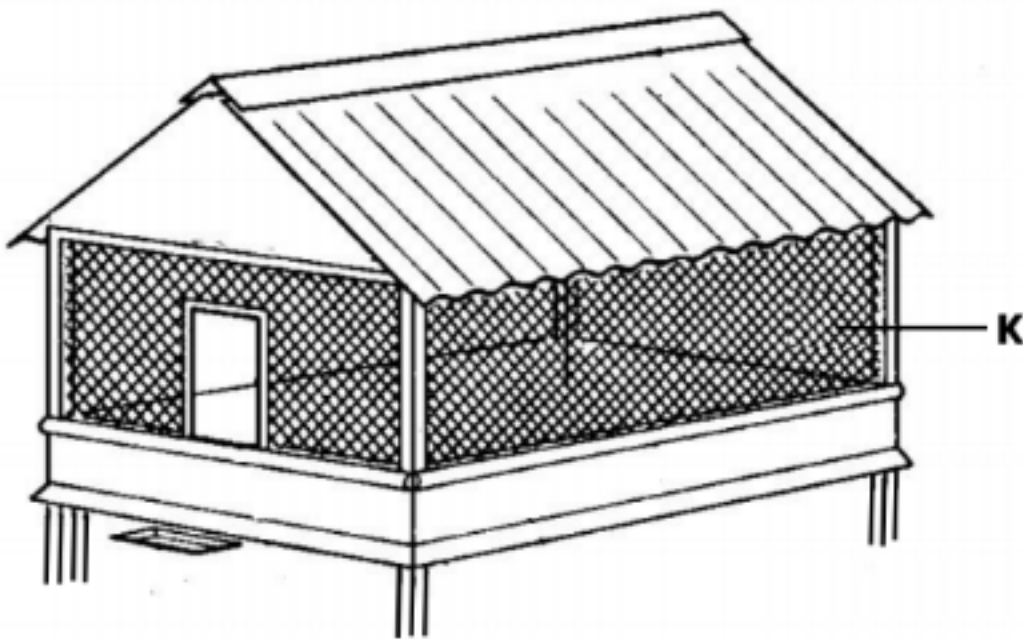


- a) Name the structure shown in the diagram above.
✓ **Scare crow**
- b) Why do crop farmers put the above structure in their gardens?
✓ **To chase / control some crop pests**
- c) Mention any **one** local material that can be used to make the above structure.
✓ **Old clothes / banana fibres / ropes / strings**
- d) What form of mechanical energy is possessed by the above structure when put in the garden?
✓ **Potential energy**

- 52.
- a) Name any **two** examples of fungi.
✓ **Mushrooms / yeast / moulds**
 - b) Give any **two** ways in which fungi are useful to people.
✓ **Mushrooms are eaten as food**
✓ **Mushrooms are sold for money**
✓ **Yeast is used in the baking of bread and cakes**
✓ **Yeast is used in the production of alcohol**

53. a) Apart from salting, mention any **two** other methods used to prevent meat from going bad.
✓ **Smoking / irradiation / refrigeration / freezing**
- b) In which way does salting prevent meat from going bad?
✓ **Salt dehydrates meat**
✓ **Salt drains moisture from meat (Reject salting dehydrates meat)**
- c) Name any **one** element of a balanced diet.
✓ **Proteins / carbohydrates / vitamins / mineral salts / water / lipids (fats and oils)**
54. a) State the main cause of fainting.
✓ **Reduced supply of oxygenated blood to the brain**
✓ **Sudden drop in the blood pressure**
- c) Give any **two** conditions that can lead to fainting.
✓ **Prolonged hunger**
✓ **Long exposure to heat**
✓ **Vigorous physical activity**
✓ **Severe pain**
✓ **Anxiety or excitement**
✓ **Shocking news**
- d) Why should the legs of a person who has fainted be raised slightly higher than the head?
✓ **To allow proper flow of oxygenated blood to the brain**

55. The diagram below shows a system of keeping poultry. Study and use it to answer the questions that follow.



- a) Name the system of keeping poultry shown above.
✓ **Deep litter system**
- b) State any **one** reason why part marked **K** is used when constructing the above shown poultry house.
✓ **To allow proper air circulation in the coop**
✓ **To allow enough light in to the coop**
✓ **To control the entry of wild animals**
- c) Give any **two** advantages of using the above system of keeping poultry.
✓ **Many birds are kept in a small space**
✓ **Birds are protected from bad weather**
✓ **Birds are protected from predators**
✓ **Birds are protected from thieves**
✓ **Culling is easy**
✓ **It is easy to collect manure**
✓ **It is easy to collect eggs**

