



**SUREKEY EXAMINATIONS BOARD**

**PRIMARY SEVEN PLE PREPARATION SET ONE**

**2023**

**INTEGRATED SCIENCE**

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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 human body organ that purifies blood.  
✓ **the kidney/kidney**
2. State any **one** chemical method used to control the spread of malaria among children.  
✓ **Spraying using insecticides**  
✓ **Sleeping under a treated mosquito net.**  
✓ **Pouring oil in the stagnant water**  
✓ **Using mosquito repellants**  
✓ **Using mosquito coils**  
(Reject: other ways of controlling mosquitoes)
3. Which type of manure is got from rotten legumes?  
✓ **green manure**
4. Name the part of the digestive system that is affected by peptic ulcers.  
✓ **the stomach**
5. What is the function of the suckers on a tapeworm?  
✓ **for attachment//for attaching//holding a tapeworm onto intestinal walls//provides extra attachment onto the intestinal walls**  
(Reject: for sucking digested food)

The diagram below shows an animal. Use it to answer questions **6** and **7**.



6. Name the group of mammals to which the above animal belongs.  
✓ **carnivorous mammals//flesh eating mammals//preying mammals**  
**//carnivores**
7. How is the feeding of the above animal similar to that of an eagle?  
✓ **Both feed on flesh (meat) // Both the above animal and an eagle feed on meat.**
8. Which nature of tools are affected by rusting?  
✓ **metallic tools**
9. State the property of air that enables a child to fly a kite.  
✓ **Air exerts pressure**  
(Reject Air moves things/ Air can move)

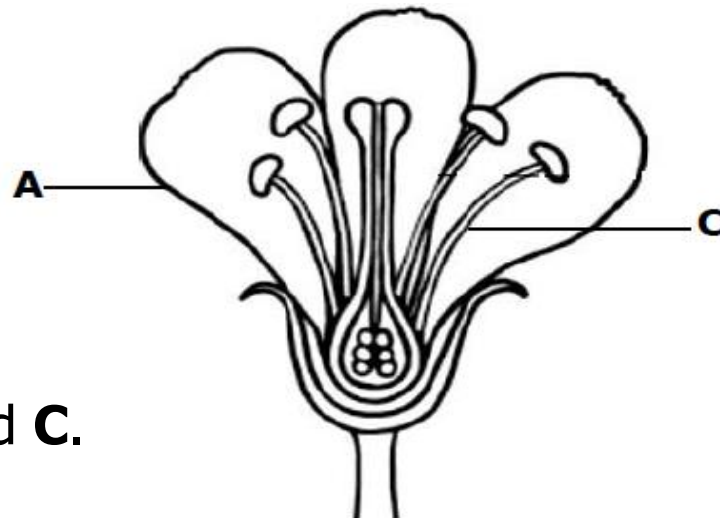
10. State any **one** condition that can make planted seeds fail to germinate.
  - ✓ **Rotten seeds**
  - ✓ **Immature seeds**
  - ✓ **Lack of necessary conditions**
  - ✓ **Seeds smeared with oil**  
(Reject hard seed coat)
  - ✓ **Overstayed seeds**
  - ✓ **Damaged seeds**
11. Give any **one** example of a deficiency disease that attacks the skeletal system.
  - ✓ **rickets/ /scurvy**
12. Give any **one** way in which the spread of bacterial diseases through food can be controlled.
  - ✓ **Promoting food hygiene**
  - ✓ **Boiling water for drinking**
  - ✓ **Preserving food**
  - ✓ **Washing hands before eating food**
13. Which method of heat transfer helps a smoker to light cigarette?
  - ✓ **Convection** (Reject conduction)
14. State any **one** characteristic of cereal crops.
  - ✓ **Produce grains**
  - ✓ **Undergo hypogeal germination**
  - ✓ **Store food in endosperm**
  - ✓ **Leaves are parallel veined**
  - ✓ **Are monocot plants**
  - ✓ **Are annual crops**
15. Name the substance at the joint that lubricates bones.
  - ✓ **Synovial fluid**
16. Give any **one** way in which health parades are important at school.
  - ✓ **Promote personal hygiene among pupils.**
  - ✓ **Educate pupils on ways of avoiding certain diseases.**
  - ✓ **Help the school health committee to identify common infections among pupils.**
17. State any **one** advantage of keeping the rabbit hutches clean and dry.
  - ✓ **Controls the outbreak of diseases among rabbits.**
  - ✓ **Controls the breeding of parasites.**
  - ✓ **Keeps the rabbits healthy**
  - ✓ **Reduces the costs of treating rabbits**
18. How does a tsetse fly spread disease germs?
  - ✓ **Through bites/ / By biting** (Reject biting)
19. State any **one** danger of self medication to human health.
  - ✓ **Can lead to taking overdose.**
  - ✓ **Can lead to taking under dose.**
  - ✓ **It is a form of drug misuse.**
  - ✓ **Leads to treatment of a wrong disease.**

20. Give any **one** life skill that children need to develop in order to safeguard themselves against sexually transmitted diseases (STDs).

- ✓ **Self esteem**
- ✓ **Self-awareness**
- ✓ **Coping with stress**
- ✓ **Peer resistance**

- ✓ **Assertiveness**
- ✓ **Coping with emotions**
- ✓ **Decision making**

The diagram below shows a flower. Use it to answer questions **21** and **22**.



21. Name the part marked **C**.

- ✓ **filament**

22. How is part marked **A** able to attract worker bees to visit the flower?

- ✓ **Brightly coloured//Has bright colours**

23. Give any **one** way of keeping the lungs in proper working condition.

- ✓ **Doing regular physical exercises**
- ✓ **Feeding on a balanced diet**
- ✓ **Keeping away from dusty places**
- ✓ **Avoid smoking**

24. How does calcium chloride make water safe for drinking?

- ✓ **Kills germs in water**

25. Name the type of teeth that are well developed in mole rats.

- ✓ **Incisor teeth //incisors** (Reject canines)

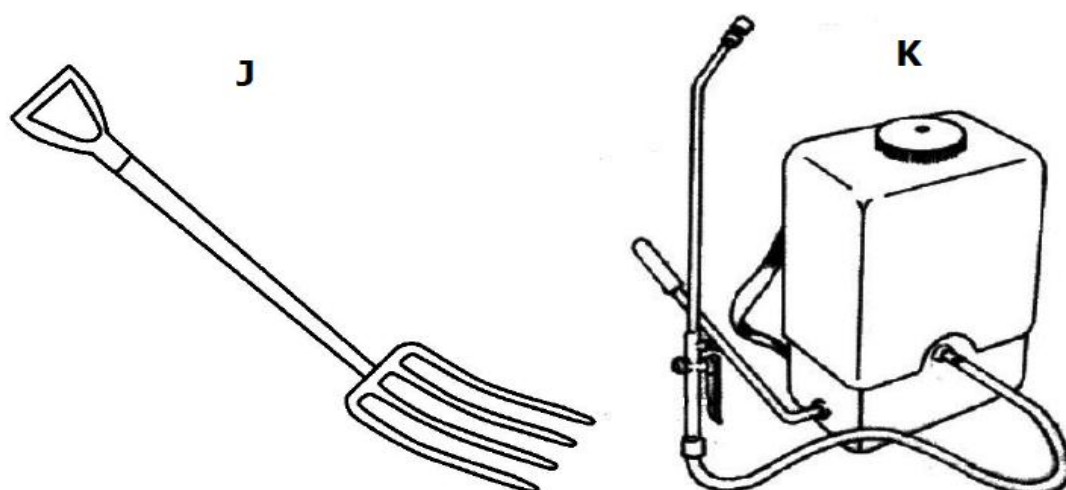
26. Apart from using spores, give **one** other way in which fungi reproduce.

- ✓ **By means of spores//sporulation**

27. Why does a tilapia die when removed from water?

- ✓ **The tilapia lacks dissolved oxygen from water which it uses for breathing.**
- ✓ **The muscular system of the mouth and operculum cannot work in air.**

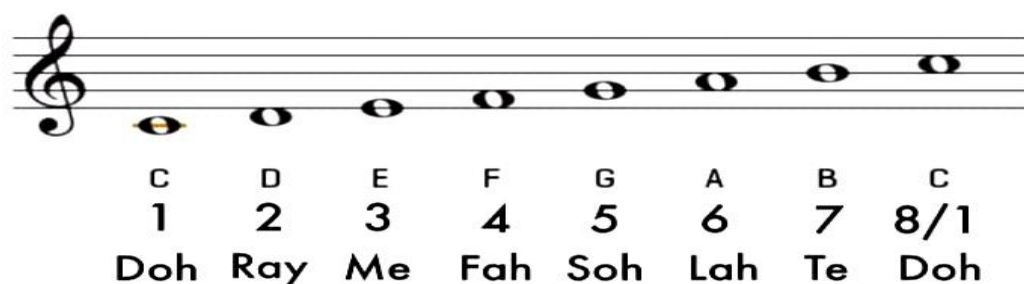
The diagram below shows garden tools. Use it to answer questions **28** and **29**.





28. Name the garden tool marked **K**.  
✓ **Knapsack sprayer.**
29. Write down any **one** activity in the garden done using the garden tool marked **J**.  
✓ **mixing/ turning manure** ✓ **loading manure**  
✓ **loading dug weeds**
30. State any **one** characteristic of crustaceans.  
✓ **They have hard crusty skin.**  
✓ **They have a pair of antennae on the head.**  
✓ **They breathe through gills.**  
✓ **They have more than four pairs of jointed legs.**  
✓ **Crustaceans have open circulatory system. Blood does not flow in a closed loop (no blood vessels).**
31. Apart from using a fire extinguisher, state any **one** other way of putting out petrol fire.  
✓ **Using fire blankets** ✓ **Using sand and dust**
32. How do railway builders prevent the railway lines from bending?  
✓ **Leave gaps between railway lines during construction.**
33. Name the substance which worker bees use to repair damaged parts of the hive.  
✓ **propolis/ /tree sap**
34. How does the use of solar energy for cooking help to conserve trees?  
✓ **Reduces the rate at which trees are cut down for wood fuel.**

The diagram below shows a method of writing music. Use it to answer questions **35** and **36**.



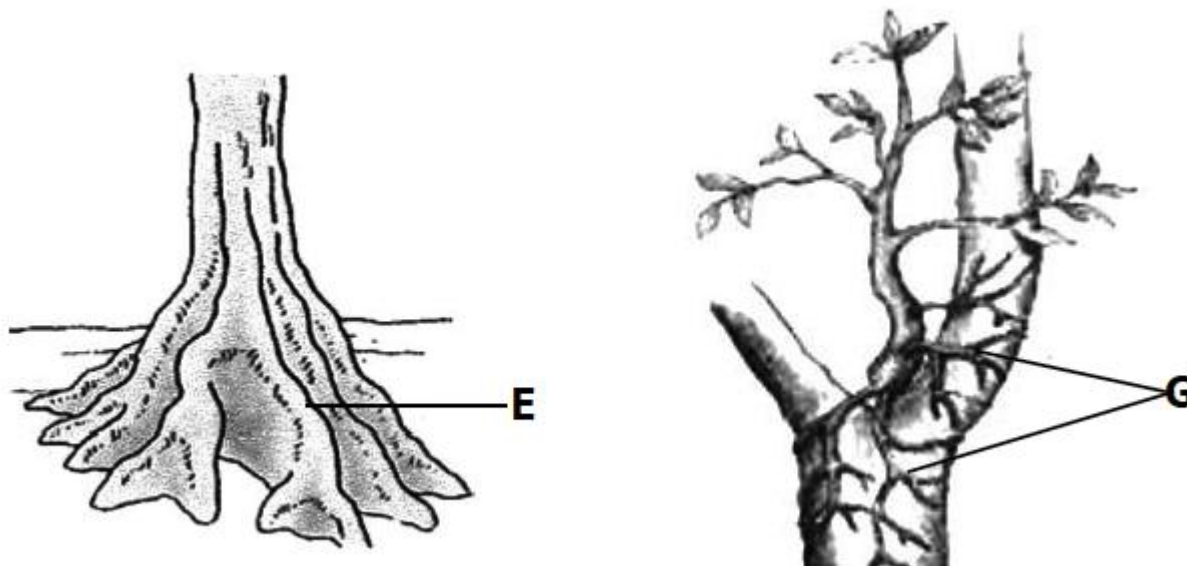
35. Identify the method of writing music shown above.  
✓ **solfa notation** (*Reject notation method/writing musical notes*)
36. Give any **one** way in which music written by the above method can be reproduced.  
✓ **Playing using a phone** ✓ **Playing using a DVD player**  
✓ **Playing using a woofer** ✓ **Playing using a computer**
37. Give any **one** reason why polythene bags should be properly disposed.  
✓ **To prevent them from polluting the soil.**  
✓ **To prevent them from killing soil organisms.**  
✓ **To prevent them from blocking soil drainage**  
✓ **To prevent them from blocking aeration in the soil.**  
✓ **To prevent them from degrading the soil.**  
✓ **To prevent them from causing soil exhaustion.**

38. How is lightning similar to nitrogen fixing bacteria in the way they improve soil fertility?  
 ✓ **Both fix nitrates into the soil//Both convert atmospheric nitrogen into nitrates and fix them into the soil.**
39. Give any **one** advantage of breast feeding to a baby.  
 ✓ **Gets natural immunity**  
 ✓ **Breast milk is always at the right body temperature.**  
 ✓ **Breast milk does not get contaminated easily.**  
 ✓ **Breast milk provides antibodies to the baby's body**  
 ✓ **Breast milk is ever ready**  
 ✓ **It is a complete food for the baby.**  
 ✓ **Creates natural love between the baby and the mother.**  
 ✓ **Breast milk is always clean for the baby to take.**  
 ✓ **Breast milk helps jaws and milk to develop.**
40. Name the biological change in plants that is similar to moulting in animals.  
 ✓ **Shedding leaves//Abscission**

### SECTION B: 60 MARKS

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

41. a) Mention any **two** changes of state of matter that take place in the absence of heat.  
 ✓ **Condensation//freezing//deposition.** (*Reject contraction*)
- b) State any **one** characteristic of matter.  
 ✓ **Has volume /occupies space**  
 ✓ **Has mass**  
 ✓ **Has shape**  
 ✓ **Has weight**
- NOTE:** In defining matter, weight should not be included but among the properties, it is included.
- c) Which force of attraction of matter enables the written work to stick on paper?  
 ✓ **Adhesion** (*Reject friction*)
42. The diagram below shows types of roots. Study and use it to answer the questions that follow.



- a) Name the type of roots marked **E**.  
✓ **Buttress roots**
- b) How are roots marked **G** important to plants?  
✓ **They enable plants with weak stems to climb others for support.// They are used for climbing.// They enable climbing plants to attach themselves to other plants.**
- c) Write down any **one** plant that grows the type of roots marked **E**.  
✓ **Jack fruit** ✓ **Silk cotton trees**  
✓ **Mvule trees** ✓ **Mango trees**
- d) In which way are roots marked **E** different from root hairs in terms of their function?  
✓ **Roots marked E provide extra support to the plant while root hairs absorb water and mineral salts from the soil.**
43. a) Apart from leaching, state any **two** factors that can make soil lose its fertility.  
✓ **Monocropping** ✓ **Soil erosion**  
✓ **Over cultivation**  
✓ **Over use of artificial fertilizers**  
✓ **Dumping polythene bags in the soil**
- b) In which way does leaching make the soil lose its fertility?  
✓ **Makes plants nutrients to sink into deeper soil layers making roots unable to absorb them.**  
✓ **Leads to loss of plant nutrients from the top soil.**
- c) Give any **one** method that a crop farmer can use to maintain soil fertility.  
✓ **Applying manure** ✓ **Growing legumes**  
✓ **Practising crop rotation** ✓ **Bush fallowing**  
✓ **Mulching the garden** ✓ **Planting trees**  
✓ **Applying artificial fertilisers in limited quantity.**
44. a) Write down any **two** activities done under the child to child programme.  
✓ **Teaching ways of preventing STDs and STIs.**  
✓ **Teaching young children how to brush teeth.**  
✓ **Teaching young children how to bathe.**  
✓ **Teaching young children toilet/latrine habits.**  
✓ **Caring for children who are sick.**  
✓ **Teaching young children how to wash their knickers and pants.**  
✓ **Teaching body changes during growth.**  
✓ **Ironing clothe for young children.**
- b) State any **two** ways in which child to child programme is important to school children.  
✓ **Promotes personal hygiene.**  
✓ **Promotes proper care among children.**  
✓ **Controls outbreak of some diseases.**

✓ **Promotes proper use of toilets/latrine by young children.**

45 a) Name the disease in rabbits whose signs are bent ears, wounds in ears and itching ears.

✓ **Ear canker**

b) Give any **one** way in which the above disease affects a rabbit farmer.

✓ **Leads to death of rabbits.**

✓ **Causes losses to a farmer.**

✓ **Increases costs of treating rabbits.**

✓ **Reduces production rate of rabbits**

c) State any **two** ways of controlling the above disease in rabbits.

✓ **Use canker powder on wounds.**

✓ **Keep the hutch clean**

✓ **Clean the ears using paraffin and cotton.**

✓ **Do not overcrowd the rabbits in one hutch.**

✓ **Spray insecticides to kill ectoparasites.**

46. a) Write down any **two** instruments used to measure the weight of an object.

✓ **Weighing stones**

✓ **Beam balance**

✓ **Weighing scale**

✓ **Weighing clock**

✓ **Spring balance**

✓ **Set of scales**

b) What determines the sinking or floating of an object?

✓ **density**

c) Why does the weight of an object increase when an object is in air?

✓ **More gravity is exerted on an object.**

47. The diagram below shows an underground stem. Study and use it to answer the questions that follow.



a) Identify the group of underground stem to which the above plant belongs.

✓ **Stem tubers**

b) Name the parts marked **U** and **W**.

✓ **U scale leaf**

✓ **W stem tuber**

c) How is the above plant propagated?

✓ **By planting the stem tuber**

48. a) Where in the body does respiration take place?

✓ **In the body cells// Living body cells// Body tissues**



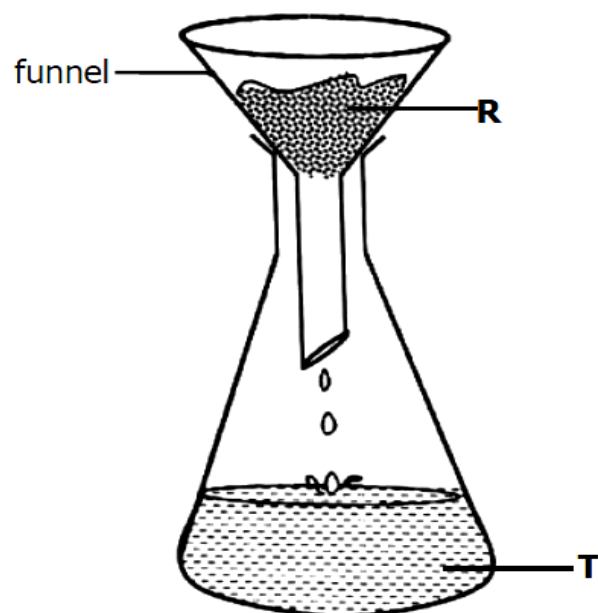
- b) Name any **two** raw materials used by the human body for respiration.  
 ✓ **Food/Glucose** ✓ **Oxygen**
- c) How do plants make use of the gas produced by animals during respiration?  
 ✓ **For photosynthesis/For making their own food**
- 49 a) How are the following useful in the process of reproduction?  
 i) testes - **Produce sperms**  
 - **Produce testosterone hormone**  
 ii) ovaries -**Produce ova.**  
 -**Produce progesterone and oestrogen hormones**
- b) In which part of the female reproductive system does each of the following take place?  
 ✓ **fertilization - oviduct/fallopian tube**  
 ✓ **implantation - uterus /womb**
50. a) Apart from yeast, write down any **two** other examples of fungi.  
 ✓ **Toadstool//puffball//moulds//mushroom// bracket fungi//truffles**
- b) Give any **two** ways in which yeast is useful to people.  
 ✓ **Used in brewing alcohol** ✓ **Used to flavor cheese**  
 ✓ **Used in baking bread** ✓ **Source of Vitamin B1.**  
 ✓ **Used to ferment fruit juice to make wine**
51. The diagram below shows a burning candle. Study and use it to answer the questions the follow.



- a) Name the part marked **M**.  
 ✓ **Flame//Candle flame** (*Reject;light*)
- b) What type of change takes place as the above candle melts?  
 ✓ **Physical change** (*Reject melting*)
- c) State what would happen to part **M** when a container is covered On the above candle.  
 ✓ **Would go off//Would stop burning// Would stop glowing**
- d) Give a reason for your answer in (c) above.  
 ✓ **Oxygen that supports burning would be cut off.**  
 ✓ **The container cuts off oxygen supply to the flame.**

52. a) Name the system of keeping poultry where birds are allowed to look for their own food.  
 ✓ **Free range system**
- b) Give any **two** advantages of the above system of keeping poultry.  
 ✓ **It is cheap to manage.**  
 ✓ **It saves time.**  
 ✓ **Birds get a balanced diet.**  
 ✓ **Birds get enough body exercise.**  
 ✓ **Birds need little care.**  
 ✓ **It controls poultry vices.**
- c) Apart from the above system, name any **one** other system of keeping poultry.  
 ✓ **Fold system//Pen system//Battery system// Cage system//**  
 ✓ **Deep litter system**  
*(Reject battery cage//Fold pen system)*
53. a) Give any **two** examples of ectoparasites in cattle.  
 ✓ **Ticks//Mites//tsetse fly**
- b) State any **one** effect of ectoparasites to cattle.  
 ✓ **Suck blood from cattle causing anaemia**  
 ✓ **Spread diseases to cattle** ✓ **Cause pain to cattle**  
 ✓ **Lower the quality of cattle products**
- c) In which **one** way can ectoparasites be controlled in cattle?  
 ✓ **Spraying acaricides** ✓ **Double fencing**  
 ✓ **Dipping cattle in acaricides** ✓ **Deticking**  
 ✓ **Practising paddock grazing**
54. a) Give the difference in use between a rubbish pit and a pit latrine.  
 ✓ **A rubbish pit is used for proper disposal of rubbish while a pit latrine is used for proper disposal of human wastes.**
- b) Why should a Ventilated Improved Pitlatrine (VIP) be left without a lid to the hole?  
 ✓ **To allow free air circulation.**
- c) State any **two** ways in which proper use of latrines is important in the community.  
 ✓ **Controls the outbreak of diarrhoeal diseases.**  
 ✓ **Controls bad smell in the environment.**  
 ✓ **Reduces the breeding of houseflies in an area.**  
 ✓ **Controls germ multiplication in an area.**  
 ✓ **Prevents pollution of air and water.**

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



- a) Identify the method of making water clean shown in the above diagram.  
✓ **Filtration.** (*Reject filtering*)
- b) Name the substances marked **R** and **T**.  
✓ **R - residues**  
✓ **T - filtrate**
- c) Give any **one** other activity done at home using the above method.  
✓ **Preparing local salt from plant ash.**  
✓ **Separating lemon// Orange// Passion fruit juice from seeds.**  
✓ **Separating tea leaves from tea.**

