

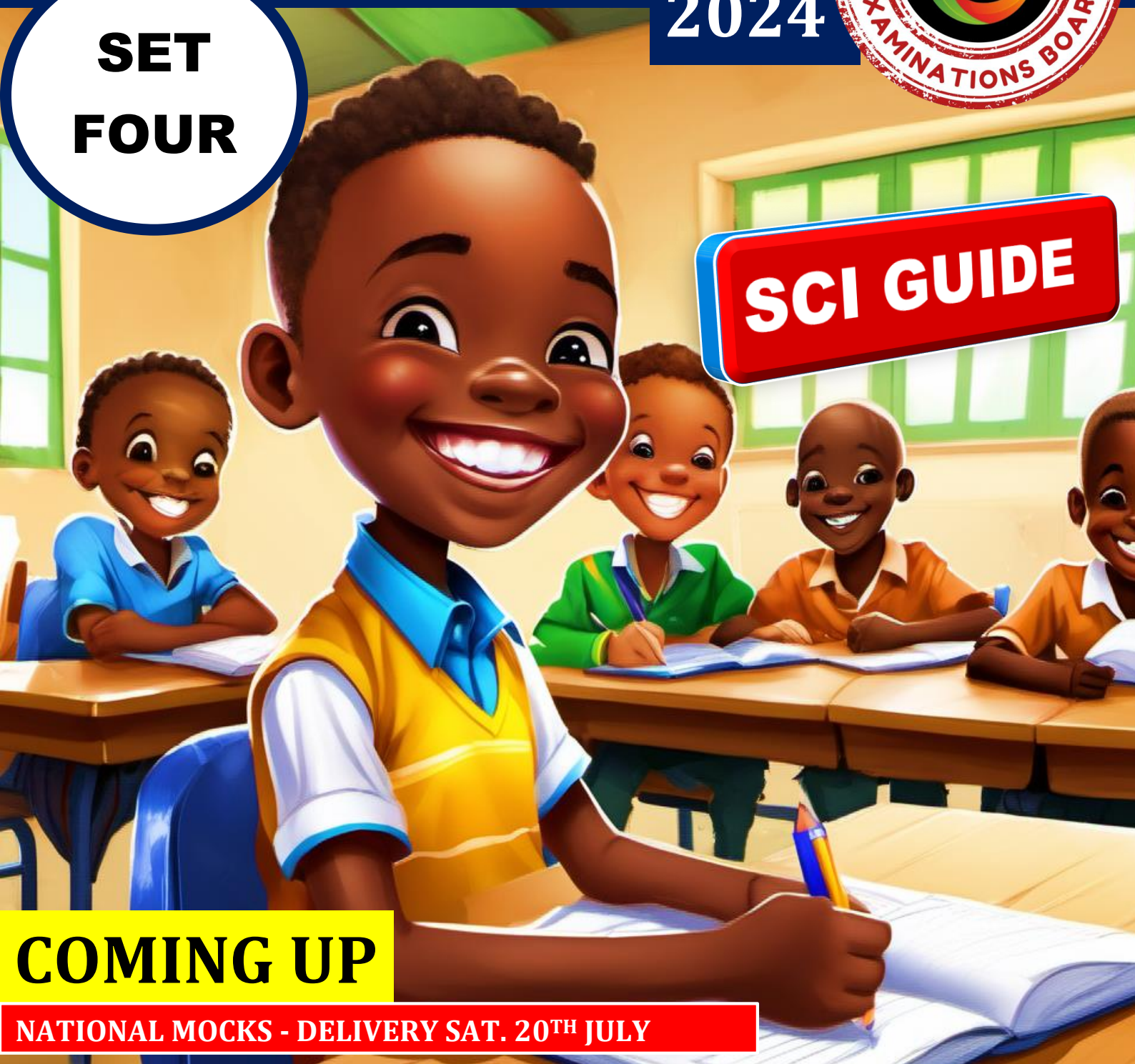
PRE MOCK

2024



**SET
FOUR**

SCI GUIDE



COMING UP

NATIONAL MOCKS - DELIVERY SAT. 20TH JULY

NAME:

SCHOOL:



0780-438054



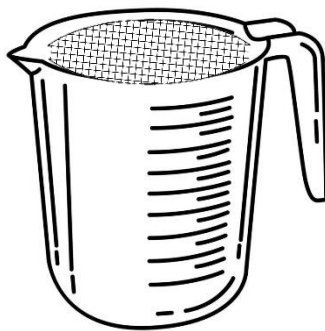
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SECTION A: 40 MARKS

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

1. Give any **one** function of roots to the plants.
 - ✓ **The roots absorb water and mineral salts from the soil.**
 - ✓ **The roots anchor (hold) the plant firmly in the ground.**
 - ✓ **Some roots store food for the plant.**
2. How does brushing of the teeth after every meal prevent tooth decay (dental caries)?
 - ✓ **Tooth brush bristles help to remove food remains between the teeth that would cause dental caries or tooth decay.**
3. Give the type of weather which enables the spawn to hatch
 - ✓ **Sunny weather** (**Reject: Sunshine because it is an element of weather**)
4. What is the importance of adhesive bandage in giving first aid to a casualty?
 - ✓ **Adhesive bandage helps in dressing small cuts and wounds.**
5. Give **one** reason why the sea is cooler than land during day time.
 - ✓ **Water reflects heat while land absorbs heat.**
 - ✓ **Sun rays go deep into water since it is transparent unlike land.**
 - ✓ **Water waves mix the warm water at the Surface with cool water below it.**
6. How does a swim bladder keep a bony fish buoyant?
 - ✓ **A swim bladder reduces the density of a bony fish's body.**

The diagram below shows equipment used on a cattle farm. Use it to answer question 7.



7. How important is the above equipment to a cattle farmer who lives in Mbarara?
 - ✓ **The above equipment helps (aids) a cattle farmer to detect the presence of mastitis in milk.**
8. How do muscles work?
 - ✓ **By contraction and relaxation**
9. Name the fungal sexually Transmitted disease.

✓ **Candidiasis (~~Reject:~~ *Candida*)**

10. State **one** way in which the vent pipe of a VIP latrine helps to control air pollution.

✓ **The vent pipe lets out bad smell that would cause air pollution.**

11. Why does a dead body (corpse) become cold?

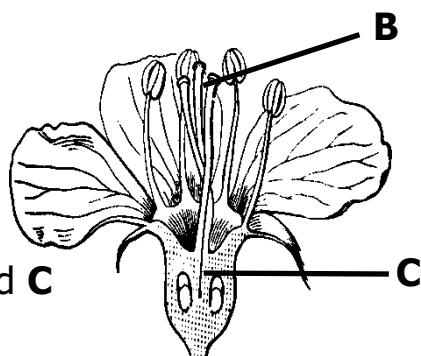
✓ **The liver that produces heat has stopped working.**

✓ **It is due to stopped blood circulation which distributes heat in the body.**

12. How does alcohol worsen stomach ulcers?

✓ **It leads to loss of appetite for food**

✓ The diagram below shows a flower. Use it to answer questions 13 and 14.



13. Name the part marked **C**

✓ **Receptacle**

14. What happens to part marked B when pollen lands on it?

✓ **A pollen tube develops.**

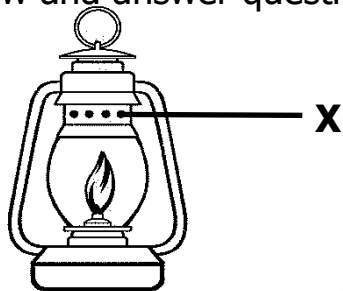
15. Apart from digestion of food, mention any **one** other chemical change that takes place in the life of living things.

✓ **Respiration.**

16. Mention any **one** indicator of roundworm infestation in humans.

✓ **Vomiting // Anaemia // Diarrhoea // Pale skin// Stunted growth in children // Weight loss of the body.**

Study the diagram below and answer questing 17 and 18.



17. Why is the glass chimney made transparent?

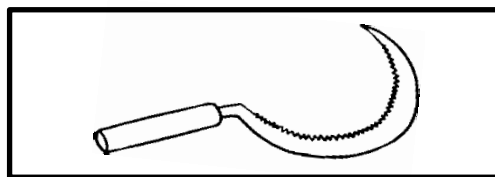
✓ **To allow out light**

18. Give the function of the part labelled X.

✓ **Part labeled X (Part x) lets out stale air.**

19. Why is VIP latrine said to be improved?

- ✓ **It does not smell badly.**
20. Why is the sun regarded as the primary Source of energy?
- ✓ **All energy resources originate from the sun directly or indirectly**
21. Why is the filament of an electric bulb made of thin coiled wire?
- ✓ **To increase electrical resistance to produce more heat and light.**
22. Apart from quill (flight) feathers, give any other type of feathers.
- ✓ **Covert (body) feathers // Down feathers//filoplume feathers.**
23. Name any **one** traditional method of preserving food stuffs.
- ✓ **Smoking // Sun drying.**
24. How does painting prevent rusting of metals?
- ✓ **Paint cuts off oxygen and moisture supply to the metal.**
25. What happens to the air in the nose?
- ✓ **Air is filtered, warmed and moistened**
26. How do ball bearings reduce frictional force?
- ✓ **Ball bearings keep the moving parts of machines separate.**
27. State any **one** way in which UNEPI promotes immunization.
- ✓ **UNEPI organises National Immunization Days.**
 - ✓ **UNEPI provides immunization equipment.**
 - ✓ **UNEPI distributes vaccines to health centres**
 - ✓ **UNEPI educates people about immunization.**
28. Apart from sunbird, Mention **one** other bird that pollinates flowers.
- ✓ **Humming bird.**
29. How are leucocytes able to defend the body against germs?
- ✓ **Through engulfing and digesting germs**
 - ✓ **Through producing more antibodies against disease germs.**
 - ✓ **Through producing more antigens against disease germs.**
30. Name the mineral deficiency disease prevented by eating food rich in iron.
- ✓ **Anaemia.**
31. How do scorpions reproduce?
- ✓ **Scorpions reproduce by giving birth to live young ones.**
32. In the space provided below, draw a garden tool used when harvesting cereal crops like rice.



33. Why do farmers keep table birds?
- ✓ **For meat production.**

34. Mention any **one** part in the human body where a ball and socket joint is found.

✓ **Shoulder / Hip/Pelvis.**

35. How does a hedgehog protect itself from enemies?

✓ **A hedgehog rolls up itself into a spiny ball**

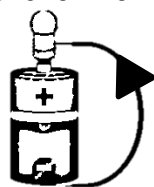
36. Apart from the sun, Mention any **one** other non-living renewable energy resource.

✓ **Water / Air**

37. How is ash formed?

✓ **Through burning wood in unlimited supply of oxygen.**

38. Study the diagram below and draw an arrow to show the flow of elections.



39. Give a reason why a male anopheles mosquito cannot spread germs that cause malaria to humans.

✓ **Male anopheles mosquito does not feed on blood but rather feeds on plant juice. Or Male anopheles mosquito feeds on plant juice but not blood.**

40. Why is sound heard clearly at night than during day time?

✓ **At night, temperature is low and sound waves travel nearer the ground than during day time.**

SECTION B: 60 MARKS

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

41. (a) What is Primary Health Care?

✓ **Primary Health Care in the programme in which individuals, families and communities work together to solve their health problems**

(b) State the element of PHC which is promoted by each of the following

i) Immunization of children and mothers.

✓ **Maternal and childcare.**

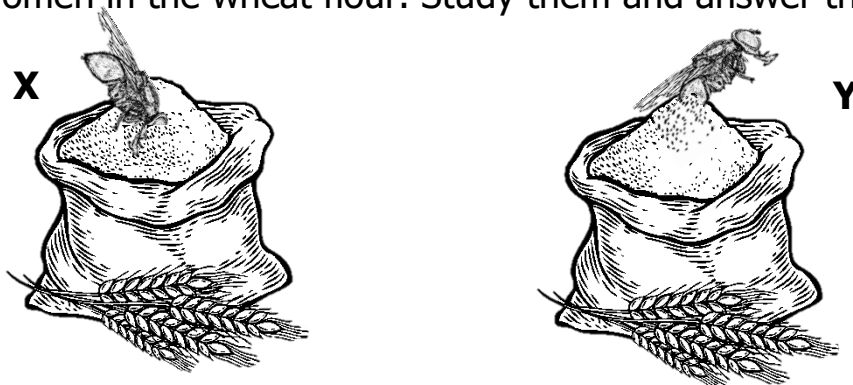
ii) Educating people about how communicable diseases are spread.

✓ **Health Education**

iii) Eating a balanced diet

✓ **Food and Nutrition.**

42. The diagram shows two houseflies X and Y which put the head and the abdomen in the wheat flour. Study them and answer the questions.



a) Which of the **two** houseflies will die after a short time?

✓ **Housefly Y / Y**

b) Give a reason for your answer in (a) above;

✓ **The spiracles used for breathing are blocked by wheat flour.**

c) Which housefly will not die?

✓ **Housefly X/X**

d) Give a reason for your answer in (c) above.

✓ **The breathing organs (spiracles) are not blocked by the maize flour.**

43. The table below shows groups of birds, their examples and types of food. Study and complete it correctly.

Groups of birds	Example	Type of food
<u>Swimming birds</u>	Seagulls	Water weeds
Birds of prey	Buzzard	<u>Flesh</u>
<u>Scratching birds</u>	Chicken	Cereals , worms
Climbing birds	<u>Woodpecker</u>	Insects

44. (a) Identify the force of attraction between molecules of the same substance,

✓ **Cohesion force // Cohesion**

(b) Name the state of matter in which molecules are closely packed together

✓ **Solid state of matter/ solid state**

(c) Mention **two** changes of states of matter caused by heat loss:

✓ **Freezing// Deposition //Condensation**

45. (a) What is diarrhoea?

✓ **Frequent passing out of watery stools.**

(b) state the immediate effect of diarrhoea.

✓ **Dehydration**

(c) Suggest any **two** health practices an individual should do to prevent diarrhoea

✓ **Washing hands with clean water and soap after visiting the latrine(toilet)**

✓ **Washing hands with clean water and soap before eating.**

✓ **Smoking pit latrines// Boiling drinking water.**

46. (a) Define the term pollination.

✓ **Pollination is the transfer of plant pollen from anthers to the stigma of a flower on the plant.**

(b) How are the pollen grains similar to sperm cells in males?

✓ **Both pollen grains and sperm cells are male gametes.**

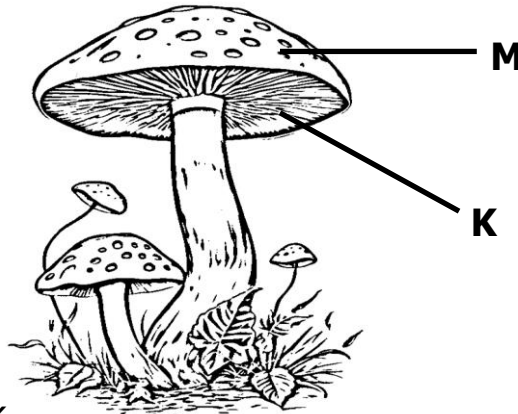
✓ **Both pollen grains and sperm cells are male reproductive cells.**

(c) What is the use of each of the following during pollination

i) Anthers- **To produce pollen grains**

ii) Stigma- **To receive pollen grains**

47. The diagram below shows a mushroom. Use it to answer the questions that follow.



a) Name part labeled with letter K

✓ **Gills**

b) How is part marked M useful to a mushroom?

✓ **To protect the gills**

c) Give **two** food values obtained from eating mushrooms.

✓ **Proteins**

✓ **Vitamin B1**

48. (a) Mention any **one** seed dispersed by explosive mechanism

✓ **Peas seed / bean / castor oil seed/ dutch man's pipe seed.**

(b) How is the black jack adapted to animal dispersal?

✓ **Black jack has hooks to attach itself on fur of animals.**

(c) State any **two** characteristics of seeds dispersed by wind.

- ✓ **Some seeds have parachute like structure.**
- ✓ **Some seeds have wing like structures**
- ✓ **Some seeds have a tuft of hair.**

49. (a) Give any **one** difference between heat and temperature.

- ✓ **Heat is a form of energy that increases the temperature of an object while temperature is the degree of hotness or coldness of an object.**

(b) How is a constriction of thermometer similar to a valve in veins?"

- ✓ **Both a constriction and a valve prevent the backward flow of liquids. *Reject: fluids because fluids also mean gasses.***

(c) Give **one** reason why gaps are left between rails during construction.

- ✓ **To Leave room for expansion on hot days.**

50. (a) Which health condition in human beings results from reduced supply of oxygenated blood to the brain ?

- ✓ **Fainting (*Reject Dizziness*)**

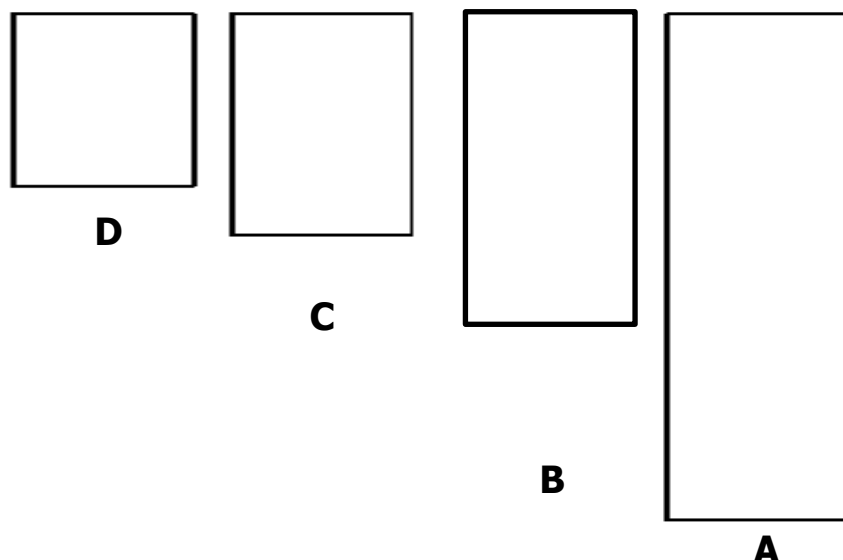
(b) Write down any **two** factors that can lead to the health condition above in human beings.

- ✓ **Vigorous body physical exercises // Alcoholism // Severe pain**
- ✓ **Dehydration // Prolonged hunger.**
- ✓ **Prolonged standing in sunshine // Receiving shocking news.**

(d) How can a casualty with the health condition above be helped to allow the flow of oxygenated blood to the brain?

- ✓ **By raising the casualty's leg higher than the head.**

51. The bar graph below is of parts of air. Study and use it to answer questions that follows



- a) Name the part of air marked C in the bar graph above.
 ✓ **Rare gases/Inert gases/Noble gases**
- b) Which letter represents the part of air that supports combustion in the bar graph above
 ✓ **Letter B/B**
- c) What is the importance of part of air marked **D** in the bar graph above?
 ✓ **Part of air marked D is used as preservative in carbonated (fizzy drinks)**
 ✓ **Used in fire extinguisher to put out fire.**
- d) Name the part of air marked letter with letter A in the bar graph above.
 ✓ **Nitrogen gas/Nitrogen**
52. (a) Name the example of alternating current electricity produced by burning uranium in a nuclear reaction
 ✓ **Atomic electricity / Nuclear electricity**
- (b) State the energy change that occurs in generation of nuclear electricity
 ✓ **Chemical energy changes to electrical energy**
- (c) Apart from the above current electricity give any other **two** examples of current electricity.
 ✓ **Hydroelectricity**
 ✓ **Thermal electricity.**
 ✓ **Geothermal electricity**
 ✓ **Solar electricity**
53. (a) What name is given to a special structure in which chicks are cared for?
 ✓ **Brooder.**
- (b) Write down any **two** types of brooder.
 ✓ **Infrared lamp brooder**
 ✓ **Kerosene brooder**
 ✓ **Charcoal brooder**
- (c) Give a reason why infrared lamp is raised.
 ✓ **To prevent the chicks from being burnt.**
54. (a) state how the following are useful to the fish
 i) Operculum
 ✓ **It protects the gills from damage**

ii) Streamlined body.

✓ **To reduce (overcome) viscosity friction in water.**

✓ **To reduce water resistance during swimming / movement.**

iii) Lateral line

✓ **For detecting sound vibrations in water for hearing**

✓ **For detecting pressure changes in water.**

(b) What name is given to animals whose body temperature varies with that of the surroundings?

✓ **Cold blooded vertebrates / poikilothermic**

55. Match the items in List A with those in List B correctly.

List A

Herbicides

Pesticides

Acaricides

Insecticides

List B

Insect vectors

weeds

ticks

pests

(i) **Insecticides** **insect vectors**

(ii) **Acaricides** **Ticks**

(iii) **Pesticides** **Pests**

(iv) **Herbicides** **Weeds**

END