



# NERDS EXAMINATIONS BOARD

## 2024 RESOURCEFUL SET

### INTEGRATED SCIENCE

*Time allowed: 2 hours 15 minutes*

Index No:	Random No.						Personal No.		

Candidate's name: .....

Candidate's signature: .....

District No. :						
----------------	--	--	--	--	--	--

Read the following instructions carefully;

1. Do not write your **school** or **district name** anywhere on this paper
2. This paper has two sections: **A** and **B**.  
Section **A** has **40** questions and section **B** has **15** questions.
3. Answer **all** questions. **All** the answers for both sections **A** and **B** must be shown in the spaces provided.
4. **All** working must be done using a **blue** or **black** ball point pen or ink. Any work done in pencil will **NOT** be marked except drawings and diagrams.
5. Unnecessary **changes** in your work and handwriting that cannot easily be read may lead to loss of marks.
6. Do not fill anything in the table indicated: "**For examiners' use only**" and the boxes inside the question paper.

FOR EXAMINERS' USE ONLY		
Qn. No.	MARKS	EXR'S NO.
1 - 10		
11 - 20		
21 - 30		
31 - 40		
41 - 43		
44 - 46		
47 - 49		
50 - 52		
53 - 55		
<b>TOTAL</b>		

## SECTION A: 40 MARKS

*Answer all questions In this section.*

*Questions 1 to 40 carry one mark each.*

1. State the reason why the human skin develops goose pimples during cold weather.

.....

2. State any one function of the diaphragm during the process of breathing.

.....

3. Name any one agent of soil erosion.

.....

The diagram below shows an animal in the group of invertebrates. Use it to answer questions 4 and 5.



4. Name the animal shown in the diagram.

.....

5. State the group of invertebrates to which the animal belongs.

.....

6. Mention any one way in which vegetables can be kept fresh for some time.

.....

7. State one way in which bacteria are useful in the formation of soil.

.....

8. Give the reason why a person suffering from bilharzia develops anemia.

.....

9. Give any one reason why it is dangerous to take shelter under tall trees during rain.

.....

10. Mention one way in which air circulation in a rabbit hutch can be improved.

.....

11. Give any one way in which you can utilize empty plastic bottles at home.

.....

12. Mention one function of a bandage found in a first aid kit.

.....

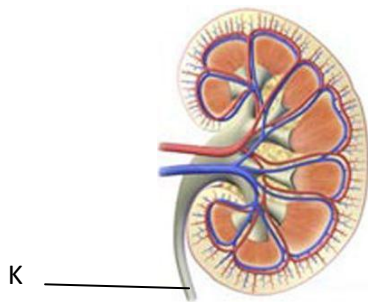
13. State any one way in which fermentation is important in our daily life.

.....

14. State any one reason why a builder would prefer a pulley to an inclined plane when lifting sand from the ground to the top of a building.

.....

The diagram below shows a human body organ. Use it to answer questions 15 and 16.



15. Name the organ shown above.

.....

17. Give the function of the part labeled N.

.....

16. Identify any one effect of pests and diseases on tuber crops.

.....

17. State the property of air used in filling balloons.

.....

18. Mention any one way in which electric shocks can be prevented in a home.

.....

19. Give one reason why the vacuum in a thermos flask prevents heat loss by conduction and convection

.....

20. State the reason why a cubic unit of wool weighs less than a cubic unit of a stone.

.....

21. Name the immunisable viral disease which is spread due to poor sanitation.

.....

22. Give one reason why we should regularly wash our hands with clean water and soap.

.....

21. Mention any one reason why harvesting of honey should be done during day time.

.....

23. Give any one way in which crop farmers can keep seeds viable for a long time.

.....

24. Name the element of Primary Health Care which promotes the human body cleanliness.

.....

25. State any one way in which taking medicine without the instruction of a health worker can affect a family.

.....

26. Give any one example of an emotional change in adolescents.

.....

27. Mention one reason why you are encouraged to brush the tongue as well when cleaning the teeth.

.....

28. Give one way in which rusting is important to the environment.

.....

29. State any one way in which planting of trees alongside other crops improves the quality of soil.

.....

30. Name the disorder in the skeletal system where a bone moves away from its normal position at the joint.

.....

31. State the reason why a ray of light bends as it passes through a glass block.

.....

32. What are pulleys?

.....

33. State any one way of conserving water as a resource in the environment.

.....

34. Mention any one activity a School Health Club can do to improve the health of people in school.

.....

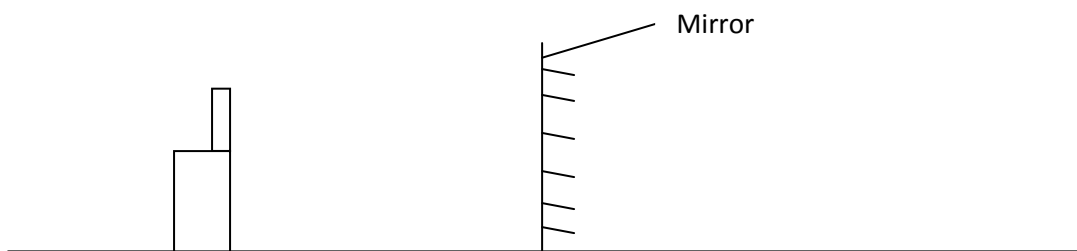
35. Mention one way in which the antennae of insects are similar to the human skin in terms of function above.
- .....
36. State one way in which paddocking method of grazing cattle helps to break the life cycle of pests on a farm.
- .....
37. State any one feature of insect pollinated flowers.
- .....
38. Why does heat weaken the strength of a magnet?
- .....
39. Give another name for cold blooded animals.
- .....
40. Which enzyme is responsible for coagulation of breast milk in babies?
- .....

### SECTION B: 60 MARKS

*Answer all questions in this section.*

*Questions 41 to 55 carry four marks each.*

41. (a) Draw the image of the diagram below.



- (b) Why do rough mirror surfaces form unclear images?
- .....
- .....
- (c) Name any one law of reflection.
- .....
- 42(a) Name the two muscles found in the human arm.
- (i) .....
- (ii) .....
- (b) State any one function of muscles in the human body.
- .....

(c) State the importance of maintaining correct posture.

.....

43. (a) Name the correct garden tool for transplanting seedlings.

.....

(b) State the reason why evening time is the best for transplanting seedlings.

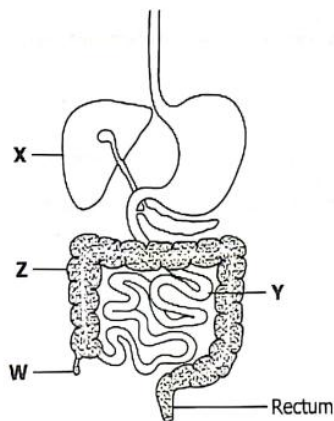
.....

(c) Mention any two advantages of mulching a garden after transplanting.

(i) .....

(ii) .....

44. The diagram below shows part of the human digestive system. Use it to answer the questions that follow.



(a) Name the parts labeled;

(i) X .....

(ii) w .....

(b) State any one function of the following parts:

(i) Y .....

(ii) Z .....

45. (a) Name the germ that causes cholera.

.....

(b) Explain why cholera is common in slums. (02 marks)

.....

.....

.....

(c) Apart from proper use of latrines, mention any one other way of controlling the spread of cholera in the communities in (b) above.

46. The table below shows some of the **steps followed in the cleaning of clothes** and the **purpose of each step**. Complete the table correctly.

Step	Purpose
.....	Separating cloths according to washing
Soaking	.....
.....	Removing dirty soapy water from the clothes.
Ironing	.....

47. (a) What is crop rotation?

(b) Explain why crop rotation is important to a farmer. (02 marks)

(c) Apart from crop rotation, name any other agricultural practice that enhances yield production.

48.(a) Mention any two materials that can be used in a digester to produce biogas.

(i).....

(ii).....

(b) Give a reason why a biogas digester should be tightly sealed.

(c) State any one advantage of using biogas.

49. (a) Why are face masks made up of a smooth cloth materials?

(b) Identify any two diseases that can be prevented by the use of the mask.

(i).....

(ii).....

(c) Mention any one good practice of using the face mask.

50.(a) Mention one example of musical instruments in each c of the groups below:

(i) String instruments.....

(ii) Percussion Instruments.....

(b) Name any two methods of storing sound.

(i).....

(ii).....

51.(a) State the name given to insets that live and work together.

.....

(b) Give any one way in which insects are useful to people.

.....

(c) State any two human activities that are dangerous to insects in the environment.

(i).....

(i).....

52. (a)What is weather?

.....

.....

(b) Give any two reasons why knowing weather conditions is important to your school.

(i).....

(ii).....

(c) Name any one element of weather.

.....

53. (a) State the meaning of the term vaccine.

.....

.....

(a) Mention the way in which polio vaccine is administered.

.....

(b) State the reason why vaccines should be stored in a cool place.

.....

(c) Identify any one way you can support immunization programs in your community.

.....

54.(a) Name the physical change which leads to the formation of the following:

(i) Ice .....



(ii) Rainfall.....

(b) State any two effects of physical changes caused by soil erosion in the environment.

(i).....

(ii).....

55. (a) Name the class of food that helps in the repair of body cells.

.....  
.....

(b) Apart from contamination of food, mention any two other challenges that people who buy food from markets get.

.....  
.....

(c) State any one way of controlling food contamination in a market.

.....  
.....

**END**