



# NERDS EXAMINATION SERIES

## SPECIAL PRE-MOCK (SET 1) 2024

### INTEGRATED SCIENCE

*Time allowed: 2 hours: 15 minutes*

Random No.						Person No.		

Candidate's Name: .....

Candidate's Signature: .....

District Name: .....

**Read the following instructions carefully:**

1. This paper has **two Sections: A and B**.
2. Answer **all** questions. All answers to both sections **A and B** must be written in the spaces provided.
3. All answers must be done using a blue or black ball-point pen or fountain pen.
4. Unnecessary changes of work may lead to loss of marks.
5. Any handwriting that cannot be easily read may lead to loss of marks.
6. Do not fill anything in the boxes indicated:  
**"For Examiners' Use Only"** and those inside the question paper.

FOR EXAMINER'S USE ONLY		
Qn. No.	Marks	EXR'S NO.
01-1		
11-20		
21-30		
31-40		
41-43		
44-46		
47-49		
50-52		
53-55		
TOTAL		

## SECTION A: (40 MARKS)

1. Name the sensory organ responsible for tasting.

.....  
.....

2. Why is a rat grouped under vertebrates?

.....  
.....

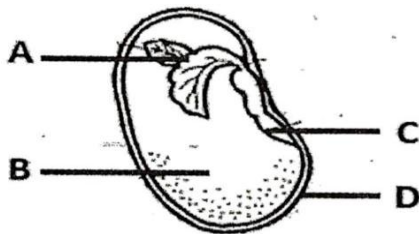
3. How are birds able to overcome friction in air during flight?

.....  
.....

4. Where in the alimentary canal does the digestion of food start from?

.....  
.....

**Use the diagram to answer questions 5 and 6.**



5. Of what importance is the part marked **B** during seed germination?

.....  
.....

6. Name the part marked **D**.

.....  
.....

7. Calculate the density of an object which has a mass of 20g and volume of 40cc.

8. How are echoes important to bats?

.....  
.....

9. In which one way are the air sacs adapted to gaseous exchange?

.....

.....

10. How is heat transfer by radiation important to crop farmers?

.....

.....

11. What condition results from shortage of oxygen supply to the brain?

.....

.....

12. How does the use of hydro-electricity help to conserve trees in the environment?

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.....

13. Mention the vaccine administered to infants to protect them from tetanus.

.....

.....

14. Write down any one type of pulley system.

.....

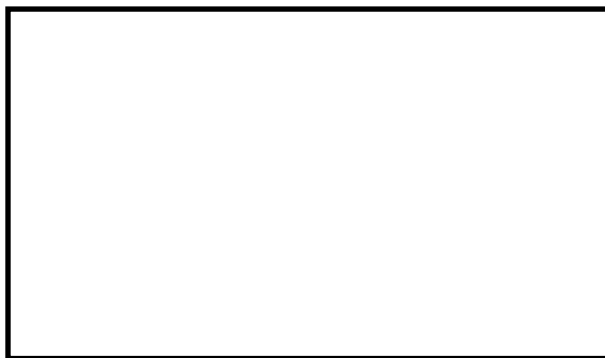
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15. Suggest any one advantage of using free range system of rearing poultry.

.....

.....

16. Draw a canine tooth in the space below.



17. State any one factor that affects the rate of transpiration.

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.....

18. How is synovial fluid important at a joint?

.....

.....

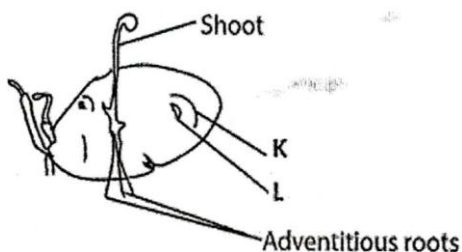
19. As a P.7 candidate, what advice can you give to your friend who has started smoking to help him stop the habit?

.....

.....

20. What is a fracture?

.....  
.....  
The diagram below shows part of an Irish potato plant. Use it to answer the questions 21 and 22.



**21.** Name the part marked **K**.

.....  
.....  
22. How is the above plant propagated?

.....  
.....  
23. Which structures in veins help to prevent the back flow of blood?

.....  
.....  
24. Why do electric engineers wear rubber gloves when they are at work?

.....  
.....  
25. How can a farmer take good care of his rabbits on a farm?

.....  
.....  
26. Name any one mineral we get from drinking water.

.....  
.....  
27. How can the pitch of a string musical instrument be increased?

.....  
.....  
28. Name one disorder that affects the digestive system.

.....  
.....  
29. State any one characteristic of insect pollinated flowers.

.....  
.....  
30. Why is lightning seen before hearing the thunder?

31. Give one good practice that should be done after using a toilet?

.....  
.....

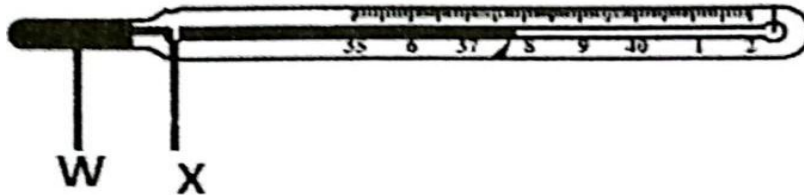
32. Give any one disease which affects the skin.

.....  
.....

33. Name any one solute used during preparation of **ORS**.

.....  
.....

Use the diagram below to answer questions 34 and 35.



34. Name the type of thermometer above.

.....  
.....

35. Of what importance is part marked **X**?

.....  
.....

36. Mention any one agent of seed dispersal in the environment.

.....  
.....

37. What is acid soil as used in crop husbandry?

.....  
.....

38. Which type of change is "burning"?

.....  
.....

39. What is the importance of maintaining proper body posture?

.....  
.....

40. How is wearing a helmet important to a motorcycle rider?

.....  
.....

## SECTION B: (60 MARKS)

41. a) What is the meaning of source of light?

.....  
.....

b) Give any two examples of natural sources of light.

i) .....

ii) .....

c) How is light important to us?

.....  
.....

42. a) Name any one method used in cattle rearing in Uganda.

.....

b) Write down any two diseases that affect cattle in Uganda.

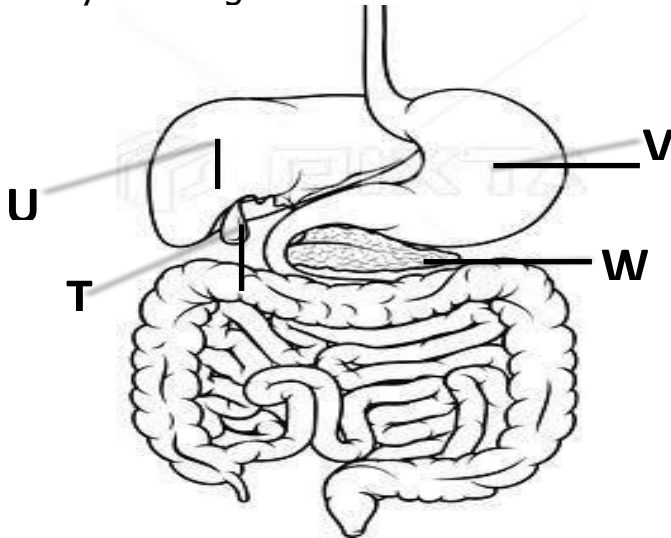
i) .....

ii) .....

c) Give any one way how the spread of diseases in cattle can be controlled.

.....

43. Study the diagram below and use it to answer the questions that follow.



a) Identify the body system shown above.

.....

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

**U** .....

**W** .....

c) State any one importance of hydrochloric acid found in part marked **V**.

.....  
.....

44. a) Give a reason why tarmac roads are rough.

.....  
.....

b) Name two things which are used to reduce friction.

i) .....

ii) .....

d) How is friction important in our daily life?

.....

45. a) State the importance of each of the following parts of the human ear.

i) Pinna.....

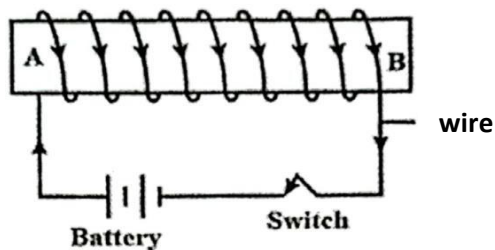
ii) Ear drum.....

b) Mention one disease and one disorder of the ears.

i) Disease.....

iii) Disorder.....

46. Use the diagram below to answer the questions that follow.



a) Name the method of making magnets shown above.

.....

b) Mention one other method of making magnets.

.....

c) Identify the pole at part marked **B**.

.....

d) State any one use of magnets.

.....

47. a) Give the two types of breathing.

i) .....

ii).....

b) State the importance of cilia found in the nose.

.....

c) Mention any one non communicable disease that affects the lungs.

.....

48. Energy resources are things in the environment that are used by people to produce useful energy.

a) Give two examples of renewable energy resources.

i).....

ii).....

b) Why are the resources mentioned in a) called renewable resources?

.....

c) What do we call the lowering of the quality of the environment?

.....

49. a) Give the meaning of germination.

b) Which condition of germination helps in respiration?

c) Name two examples of seeds that have epigeal germination.

i) .....

ii) .....

50. a) Give the meaning of the following terms.

i) Energy.....

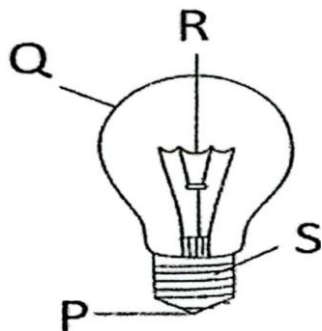
ii) Work.....

b) Write down two forms of energy.

i) .....

ii) .....

51. The diagram below shows the kidney. Use it to answer the questions that follow.



a) Give two forms of energy produced by part **R**.

i) .....

ii) .....

b) Name one gas found in part **Q**.

c) Why is part **Q** transparent?

52. a) Give two methods of making alcohol.

i) .....

ii) .....

b) Which method above involves the use of yeast?

c) Why are people always advised not to take excessive alcohol?



53. a) How is a watering can useful to a farmer?

.....

b) Write down two examples of garden tools apart from a watering can.

i) .....

ii) .....

c) How are garden tools prevented from rusting?

.....

54. a) State any one function of leaves to people.

.....

b) Name any one example of a simple leaf.

.....

c) Mention any one use of leaves to people.

.....

d) How can leaves be dangerous to people?

.....

55. Match the parts in A to the types of movable joints in B correctly.

**Group**

**Group B**

i) Elbow

Gliding joints

ii) Neck

Hinge joint

iii) Wrist

Ball and socket joint

iv) Shoulder

Pivot joint

i) Elbow.....

ii) Neck.....

iii) Wrist.....

iv) Shoulder.....

END