



SUREKEY EXAMINATIONS BOARD  
PRE-PLE LOWER SERIES (MOSCOW)  
2024

INTEGRATED SCIENCE

*Time Allowed: 2 hours 15 minutes*

Random NO.	Personal No.

Candidate's Name: .....

Candidate's Signature: .....

School Name: .....

**Read the following instruction carefully:**

1. Do not forget to 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. The paper has **15 printed pages** altogether.
3. Answer **all** the questions. **All** answers to both sections **A** and **B** must be written in the spaces provided.
4. All answers **must** be written using a **blue** or **black** ball point pen or ink. Any work written in pencil will **not** be marked.
5. Unnecessary **changes** in your work and handwriting that cannot be read easily may lead to **loss of marks**.
6. Do not fill anything in the table indicated: "**FOR EXAMINERS' USE ONLY**" and 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

Questions 1 to 40 carry one mark each

1. Name the best season for harvesting sweet potatoes.

.....

2. State any **one** role of the school health committee in the promotion of health at school.

.....

3. Give any **one** factor that favours the breeding of bacteria in an area.

.....

4. By what process does the body release energy from digested food?

.....

The diagram below shows a bottle of soda. Study and use it to answer questions 5 and 6.



5. Name the gas enclosed in the space marked D.

.....

6. Why do soda manufacturers usually leave the space marked D when filling bottles of soda?

.....

7. State any **one** way in which capital is important when planning to start a goat keeping project.

.....

8. Write down any **one** simple message that can be displayed around the school compound to encourage good health habits.

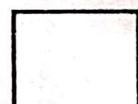
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9. State any **one** characteristic of forms of energy.

.....

10. Name the disease of teeth whose signs are swollen gums, bright red gums and bleeding gums when brushing teeth.

.....



11. Give any **one** way in which minerals can be conserved.

.....

12. State any **one** danger of buying essential drugs from local shops.

.....

13. Give any **one** way in which people use inclined planes in their daily life.

.....

14. State any **one** reason why a wire mesh should be used when constructing a house for domestic rabbits.

.....

15. State any **one** effect of physical changes in the environment.

.....

16. State the importance of using sugar when preparing Oral Rehydration Solution (ORS) for a dehydrated patient.
- .....

The diagram below shows a waste management activity commonly done by people in our community. Use it to answer questions **17** and **18**.



17. Identify the waste management activity shown in the diagram above.
- .....

18. Give any **one** way in which the activity above helps in the management of wastes in the environment.
- .....

19. Write down any **one** method of preserving food that drains moisture from the foodstuff.
- .....

20. State any **one** difference between sound energy and light energy.
- .....

21. Name any **one** human body organ where involuntary muscles can be found

.....

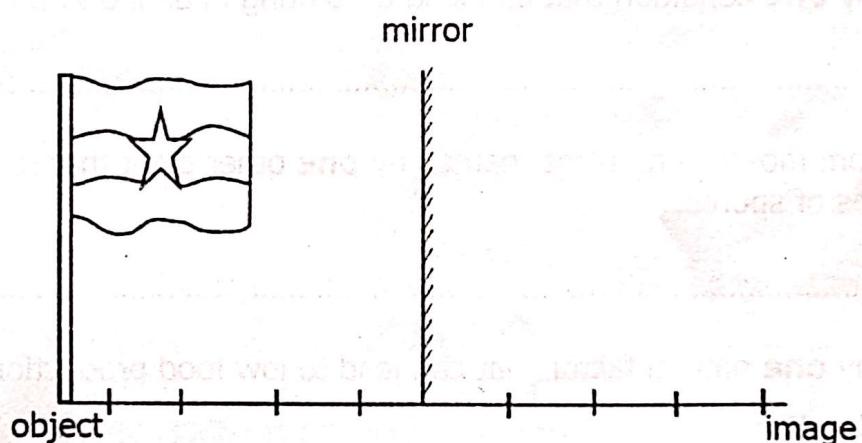
22. State any **one** way in which simple machines make work easier.

.....

23. Give any **one** effect of food taboos in nutrition.

.....

The diagram below shows an object placed Infront of a mirror. Use it to answer question **24** and **25**.



24. What type of mirror is shown in the diagram above?

.....

25. Complete the diagram by drawing the image to show its appearance in the mirror.

.....

26. State any **one** disadvantage of treating water using chemicals like chlorine.

.....

27. Apart from brewing alcohol, give any **one** other way in which fermentation is helpful to people.

.....

28. State any **one** way in which hardening off is important in crop growing.

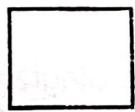
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29. In which way does a hyena benefit from living in the same environment with a lion?

.....

30. State any **one** advantage of using hydro electricity in solving daily problems.

.....



31. State any **one** condition that can lead to fainting in an individual.

.....

32. Apart from mosses and ferns, name any **one** other plant that reproduces by means of spores.

.....

33. State any **one** natural factor that can lead to low food production in an area.

.....

34. State the difference in functioning between the cortex and medulla in the human kidney.

.....

.....

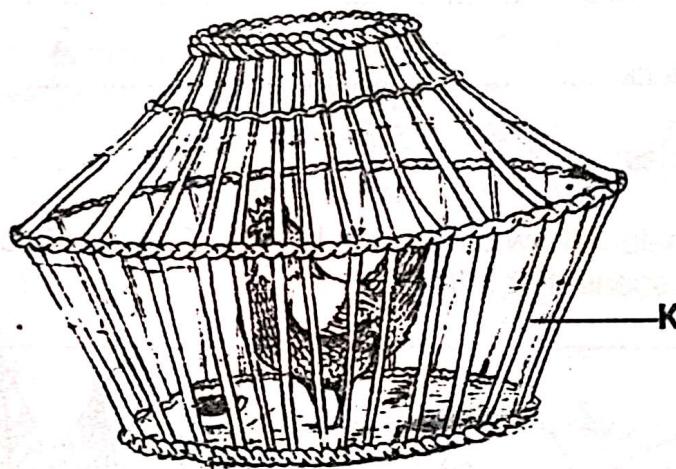
35. State any **one** factor that can make sorted seeds fail to germinate after planting.

.....

.....

36. Give any **one** way in which a rain gauge can be made to measure the accurate amount of rainfall received in an area.
- .....

The diagram below shows the local method of keeping poultry. Use it to answer questions **37** and **38**.



37. Name the system of keeping poultry shown above.
- .....

38. Mention any **one** way in which the structure marked **K** can be a danger to the birds.
- .....

39. State any **one** reason why you would advise a crop farmer to practice crop rotation.
- .....

40. Identify any **one** deficiency disease that requires an individual to feed on a lot of fruits and vegetables.
- .....



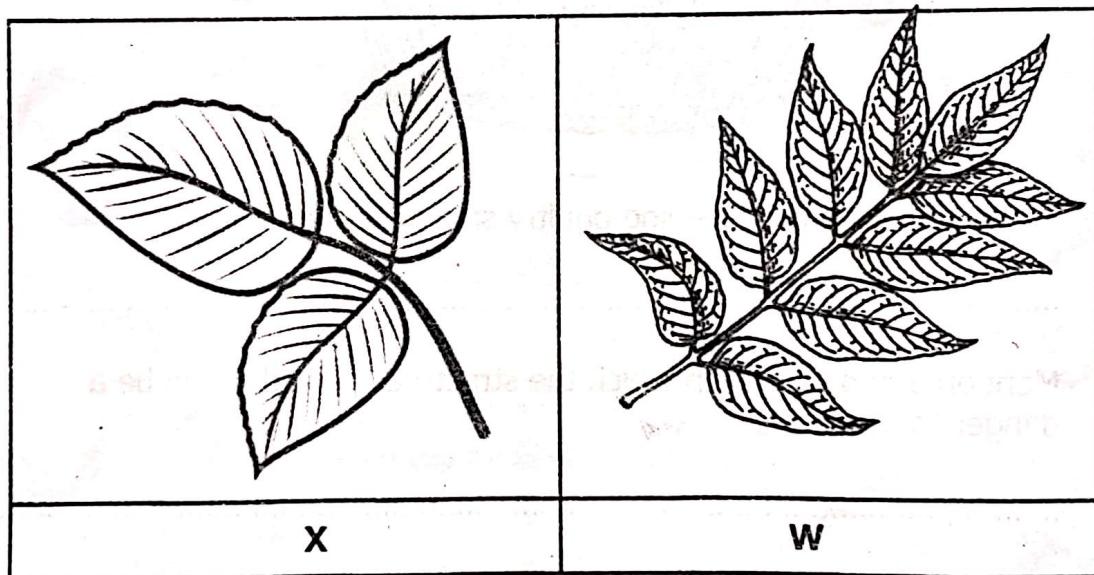
## SECTION B: 60 MARKS

Questions 41 to 55 carry four marks each

41. Name the childhood immunisable disease that causes;

- (a) Skin rashes: .....
- (b) Paralysed limbs: .....
- (c) Swollen neck: .....
- (d) Stiff muscles: .....

42. The diagrams below show compound leaves. Study and use them to answer the questions that follow.



(a) Name the compound leaves marked **X** and **W**.

- (i) **X** : .....
- (ii) **W** : .....

(b) Give any **one** plant that has the compound leaf marked **X**.

.....

(c) On the compound leaf marked **W**, label the **leaf stalk**.

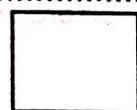
43. (a) Apart from a solar drier, give any **one** other device that uses solar energy.
- .....

- (b) What is the importance of the black lining inside a solar drier?
- .....

- (b) State any **two** ways in which the use of solar energy helps in the conservation of the environment.

(i) .....

(ii) .....



44. The table below shows diseases of the respiratory system, causes and signs. Study it carefully and complete it correctly.

Disease	Cause	Sign of the disease
Lung cancer	.....	Shortness of breath
.....	bacteria	Blood stained sputum
Pneumonia	bacteria/virus	.....
.....	virus	Nasal congestion

45. (a) Name the step used in cleaning clothes that removes;

(i) Soapy water from clothes: .....

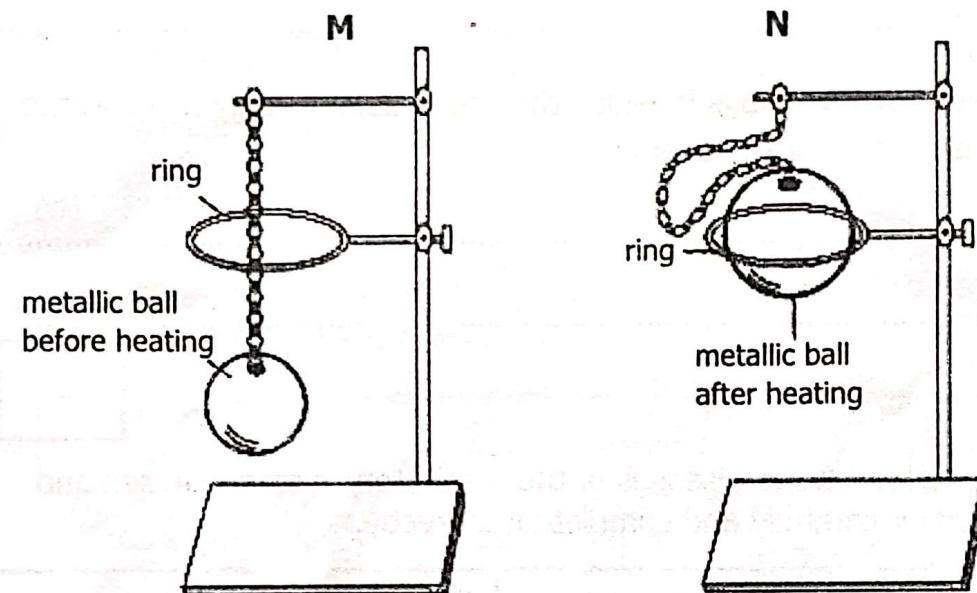
(ii) Excess water from clothes: .....

- (b) Give any **one** natural resource that is helpful to people when cleaning clothes at home.
- .....

(c) Why is water obtained by distillation not good for drinking?

.....

46. The diagram below shows an experiment on how heat affects matter. Study and use it to answer the questions that follow.



(a) Identify the state of matter affected by heat in the experiment above.

.....

(b) Give the reason why the metallic ball failed to pass through the ring in diagram N.

.....

(c) State what should be done in order to make the metallic ball pass through ring in diagram N.

.....

(d) What does the above experiment show about matter?

.....



47. (a) Name the vector that transmits;
- sleeping sickness : .....
  - relapsing fever : .....
- (b) State any **two** ways in which the spread of sleeping sickness can be controlled.
- .....
  - .....

48. The table below shows parts of the human heart in part **A** and their functions in part **B**.

<b>Part A:</b> Parts of the human heart.	<b>Part B:</b> Functions
(i) Pulmonary Artery	Transports oxygenated blood to the heart
(ii) Aorta	Prevents oxygenated and de-oxygenated blood from mixing.
(iii) Septum	Transports de-oxygenated blood to the lungs
(iv) Vena Cava	Transports oxygenated blood to all body parts.

Match correctly the parts of the heart with their functions in the spaces provided below.

- Pulmonary Artery: .....
- Aorta : .....
- Septum : .....
- Vena Cava: .....

49. (a) Write down any **two** organic materials used when making compost mature.

(i) .....

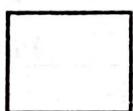
(ii) .....

(a) State **one** way in which a farmer can increase decomposition of organic matter when making compost manure.

.....

(b) Apart from compost manure, name any **one** other example of natural fertilisers.

.....



50. (a) Write down any **two** services provided to pregnant mothers during ante-natal care.

(i) .....

(ii) .....

(b) Give any **two** disorders that affect the human reproductive system.

(i) .....

(ii) .....

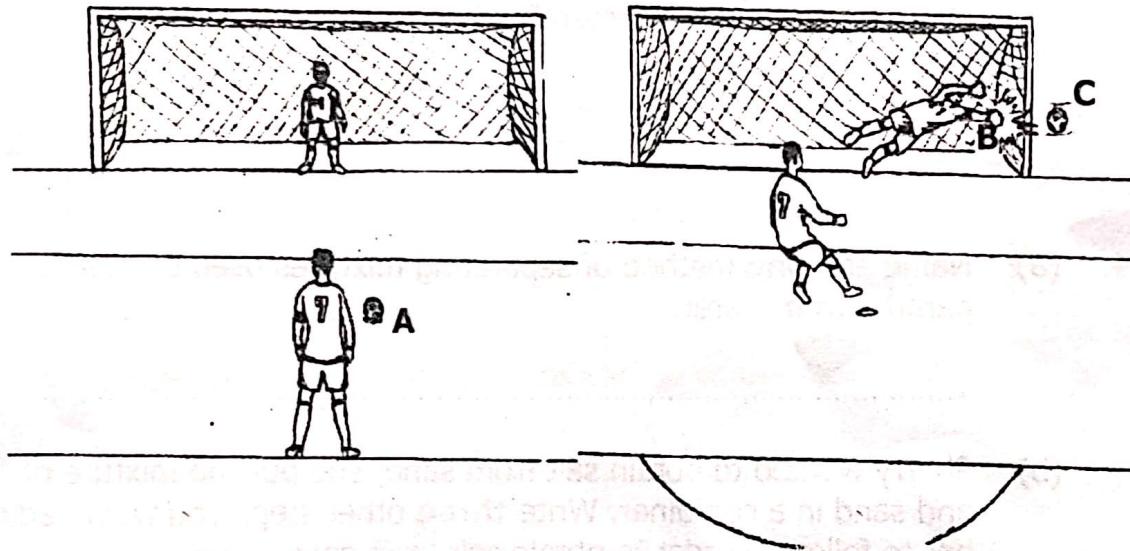
51. (a) Give any **two** practices that can harm cattle when grazing them in the field.

(i) .....

(ii) .....

(c) Mention any **one** way in which a newly born calf benefits from colostrum.

- (d) State the difference in the way in which a lactometer and a strip cup are used on the farm
- .....  
.....
52. The diagrams below show a football player taking a penalty shoot during a football match. The ball possessed the types of mechanical energy. Study them and answer the questions that follow.



- (a) Identify the type of mechanical energy possessed by the ball at Points A and B.
- (i) A : .....
- (ii) B : .....
- (b) State the energy change that takes place to the ball at point B and point C.
- .....
- (c) Name any one form of energy experienced by the ball at point C as the goal keeper receives it.
- .....

53. (a) A butcher slaughtered a cow in his abattoir and found tapeworms in the cow's meat. Identify the following from the statement above;

(i) parasite : .....

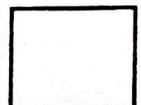
(ii) host : .....

(b) State any **one** way in which the tapeworm benefited from the cow.

.....

(c) What health condition would people get when they eat the cows meat in the above statement?

.....



54. (a) Name any **one** method of separating mixtures used to separate paraffin from water.

.....

(b) Sherry wanted to obtain salt from sand, she put the mixture of salt and sand in a container. Write **three** other steps you would advise her to follow in order to obtain salt from sand.

(i) .....

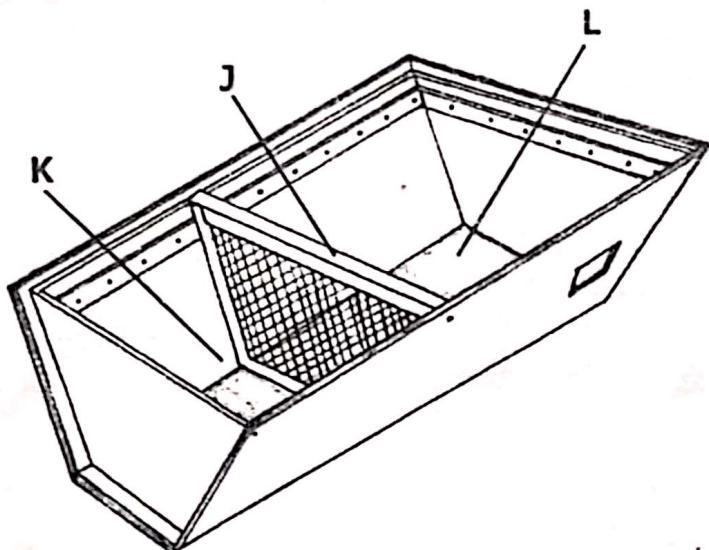
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(ii) .....

.....

(iii) .....

55. The diagram below shows a modern beehive. Study and use it to answer the questions that follow.



- (a) Identify the modern beehive shown in the diagram above.

.....

- (b) Name the parts of the modern bee hive above marked **J** and **L**.

(i) **J** : .....

(ii) **L** : .....

- (c) State the importance pf the part marked **K** on the modern beehive above.

.....

