

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE ASKED TO DO SO



GRADE-3&4

NEWTON

INTERNATIONAL SCIENCE OLYMPIAD - 2023

Test Paper

Test Booklet Series

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

Roll No.:

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Student's Name:

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Maximum Time: 90 Minutes

Maximum Marks: 96

INSTRUCTIONS

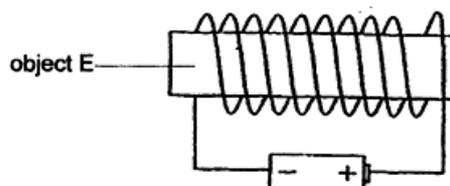
1. Please **DO NOT OPEN** the contest booklet until the proctor has given permission to start.
2. There are 24 questions in this paper. **Easy:** 3 points for each correct answer. **Medium:** 4 points for each correct answer. **Hard:** 5 points for each correct answer. 1 point will be deducted for each incorrect answer, and no penalty for skipping a question.
3. There is only ONE correct answer to each question.
4. No electronic devices capable of storing and displaying visual information are allowed during the exam.
5. Use of **calculator** is strictly prohibited in the exam.
6. Fill your **Name, Roll No., Grade and School Name** in the answer sheet.
7. To mark your choice of answers by darkening the circles in the Answer Sheet, use an HB Pencil or a **Blue/Black Ball Point Pen** only.
8. Shade your answer clearly as per the example is shown below:

CORRECT	INCORRECT								
<table border="1"><tr><td>A</td><td>●</td><td>C</td><td>D</td></tr></table>	A	●	C	D	<table border="1"><tr><td>✓</td><td>✗</td><td>●</td><td>⊖</td></tr></table>	✓	✗	●	⊖
A	●	C	D						
✓	✗	●	⊖						

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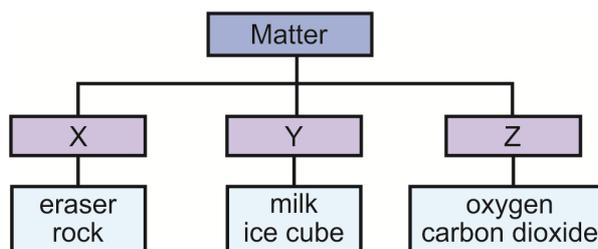
SECTION – A (3 POINT PROBLEMS)

- A glass of ice water was left at room temperature. After a few minutes, water droplets were observed on the outside surface of the glass. How did this happen?
 - The water from the glass evaporated
 - The water from the glass seeped through the glass
 - The water from the air condensed
 - The water from the air sublimed
- Which of the following is not considered as work done?
 - Opening a door
 - Climbing up a step
 - Holding a cup of coffee
 - Moving up a slope
- What is the benefit of fungus in pizza dough?
 - It makes dough taste good
 - It makes dough round
 - It makes dough soft
 - It enhances the taste of dough
- The diagram below shows an electromagnet.



Which of these objects could replace object E to make into an electromagnet?

- Nickel rod
 - Plastic ruler
 - Rubber eraser
 - Wooden chopstick
- The classification chart shown below shows how different states of matter are grouped.



Which of the following is wrongly grouped?

- Rock
 - Eraser
 - Ice-cube
 - Carbon dioxide
- Which of the following organ is the part of circulatory system?
 - Heart
 - Liver
 - Kidney
 - Blood vessels
 - Both I and II
 - Both I and IV
 - Only III
 - Only II
 - In which material does sound energy travel the fastest?
 - Wood
 - Oil
 - Empty space
 - Oxygen

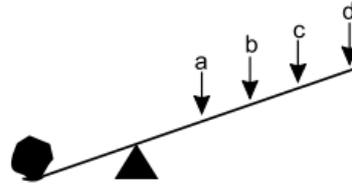
8. Which of the following is not an effect of force?

- (A) Change in time (B) Change in shape
(C) Change in speed (D) Change in direction of motion

SECTION – B (4 POINT PROBLEMS)

9. George wants to lift the rock as shown in the figure. At which point should he apply the force so that he could lift the rock easily?

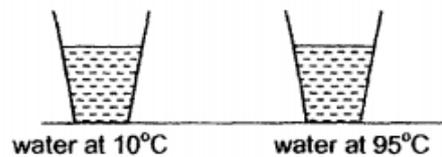
- (A) a
(B) b
(C) c
(D) d



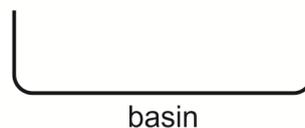
10. Olivia saw an organism. She wanted to find out whether it is an insect. Which of the following actions would enable her to do so?

- A. Measure its length
B. Count the number of legs.
C. Find out whether it has wings
D. Find the whether it has three body parts
- (A) A and B only (B) B and C only
(C) A and C only (D) B and D only

11. Susan had 2 similar glasses of water at different as shown as shown below.



She poured the two glasses of water into a basin in a room at 30°C and mixed the water well.

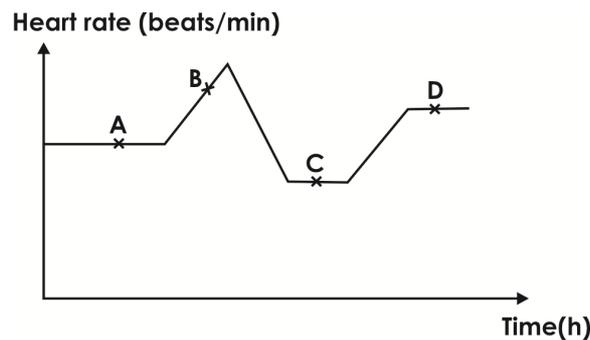


Which of the following correctly shows the temperature of water in the basin immediately and 6 hours later?

	Temperature of water in the basin (°C)	
	Immediately	6 hours later
(A)	105	30
(B)	95	30
(C)	50	30
(D)	40	20

12. Which of the following statements are similarities between a human digestive system and a plant system?
- A. Both systems make food
 B. Both systems have parts which perform different functions
 C. Both systems are made of more than one part
- (A) B and C only (B) A and B only (C) A and C only (D) A, B and C
13. Ants can find their way back to their nest because they produce a certain substance. What is the name of this substance?
- (A) Cyanide (B) Perfume (C) Pheromone (D) Sugar

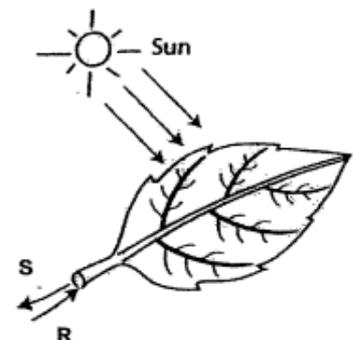
14. The following graph shows Swati's heart rate over a few hours.



Which one of the following best represents Swati's activities as shown by the graph above?

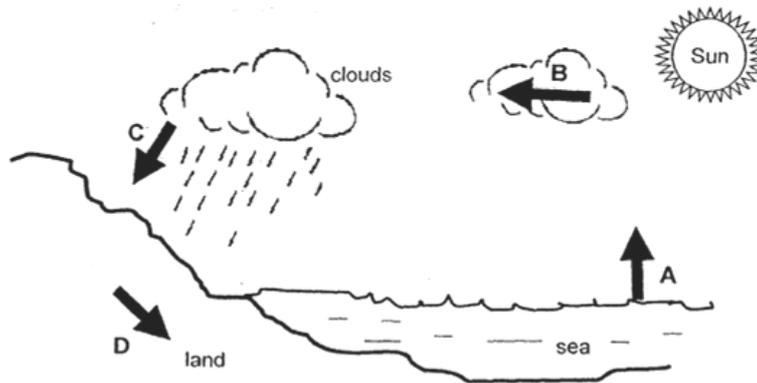
	A	B	C	D
(A)	Sleeping	Skipping	Walking	Reading
(B)	Reading	Skipping	Sleeping	Walking
(C)	Sleeping	Walking	Running	Reading
(D)	Walking	Reading	Running	Sleeping

15. A baby seal is brought to an aquarium. The aquarium workers do not need to teach the baby to swim, but they do have to teach it to hunt. This is because
- (A) Seals learn to hunt from their mother
 (B) Seals are naturally lazy
 (C) Seals do not hunt until they reach at the age of five
 (D) Seals are not very fond of hunting
16. The diagram below shows a leaf which is exposed to sunlight. Substance S is being transported out of the leaf to the stem while substance R is being transported into the leaf from the stem. What could substance S and R be?



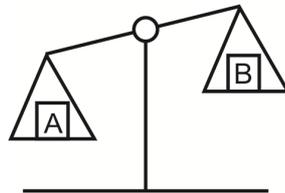
	Substance S	Substance R
(A)	Mineral salts	Water
(B)	Food	Water
(C)	Mineral salts	Food
(D)	Water	Food

20. Study the diagram of the water cycle below. The letters, A, B, C and D, represent the stages of the water cycle.



Which of the following stages, A, B, C or D, will occur faster when the temperature of the surrounding air increases?

- (A) A (B) B (C) C (D) D
21. Two cubes A and B were placed on a balance as shown below.



Next the cubes were put into two beakers containing the same amount of water as shown below.



Based on the above observation which boy made the correct observation?

Raman: Cube A has greater mass than cube B

Alex: Cube B occupied more space than cube A

Robert: The greater the mass of the cube, the greater the amount of space it occupies

- (A) Raman and Alex
 (B) Alex and Robert
 (C) Raman and Robert
 (D) Raman, Alex and Robert
22. A man is using a parachute to descend to the ground as shown in the figure. It helps in his gravitational potential energy to
- (A) Increase
 (B) Decrease
 (C) Increase and then decrease
 (D) Decrease and then increase



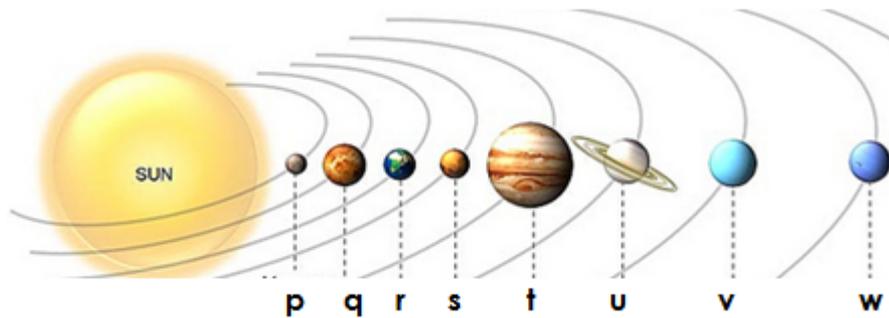
23. The table below shows the characteristics of three animals X, Y and Z. A tick (✓) shows the presence of the characteristics.

Characteristics	X	Y	Z
Has feathers	✓		✓
Can fly	✓		
Lay eggs	✓	✓	✓

What could X, Y and Z be?

	X	Y	Z
(A)	Parrot	Butterfly	Eagle
(B)	Bat	Guppy	Platypus
(C)	Eagle	Platypus	Ostrich
(D)	Butterfly	Bat	Guppy

24. Study the given diagram showing part of the solar system. Which of these planets are mainly made up of frozen gases?



- (A) p, q, r and s (B) p, r, v and w (C) t, u, v and w (D) p, q, u and v

