SOF
SCIENCE OLYMPIAD FOUNDATION

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SOF NATIONAL SCIENCE OLYMPIAD

Total Questions : 50				Time : 1 hr.

SYLLABUS

Section – 1 : Verbal and Non-Verbal Reasoning.

Section – 2 : Motion and Measurement of Distances, Light, Shadows and Reflections, Electricity and Circuits, Fun with Magnets, Our Environment, Sorting and Separation of Materials, Changes Around Us, The World of Living (Characteristics of Living Beings, Parts of Plants, Body Movements in Animals and Adaptation), Food and its Components, Fibre to Fabric.

Section – 3 : Higher Order Thinking Questions - Syllabus as per Section – 2.
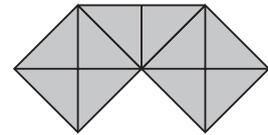
LOGICAL REASONING

1. If A stands for add and B stands for subtract, then 4 A 3 B 3 A 2 stands for _____.
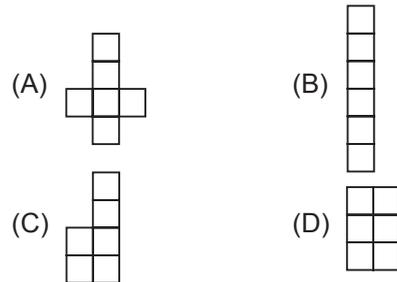(A) 2
(B) 4
(C) 6
(D) 8

2. Pia walks a distance of 4 metres towards south. Then she turns to the left and walks 3 metres. After this she turns to the right and walks 4 metres. In which direction is she facing now?
(A) North-East
(B) South
(C) North
(D) South-West

3. Select a figure from the options in which figure (X) is exactly embedded as one of its part.

Figure (X)

(A)
(B)
(C)
(D)

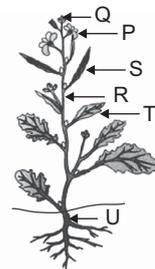**4.** Find the number of triangles in the given figure.
(A) 25
(B) 20
(C) 21
(D) 26

5. Which net, when folded, will cover all the faces of a cube?

(A)
(B)
(C)
(D)

SCIENCE

6. Read the given statements and select the correct option.
Statement 1 : The process of separation of lint and seeds from harvested cotton fibres is called ginning.
Statement 2 : Process of forming slivers from ginned material is called combing.
(A) Both statements 1 and 2 are true and statement 2 is the correct explanation of statement 1.
(B) Both statements 1 and 2 are true but statement 2 is not the correct explanation of statement 1.
(C) Statement 1 is true and statement 2 is false.
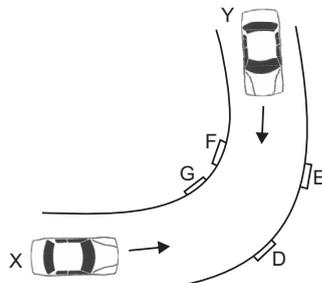(D) Both statements 1 and 2 are false.

7. We use different parts of different plants as food source. Refer to the labelled figure of a typical plant and select the option that correctly matches an edible plant part with its example.
(A) P - Broccoli, Q - Cinnamon
(B) R - Cabbage, S - Chilli
(C) T - Cabbage, U - Spinach
(D) Q - Clove, T - Lettuce

8. What adaptation does the given organism show?
(A) Strong hind leg muscles
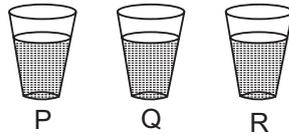(B) Hollow bones
(C) Webbed feet
(D) Both (B) and (C)

9. Two cars X and Y are travelling in opposite directions on a narrow road as shown here. Four possible positions for placing a mirror are labelled D, E, F and G. In order to avoid an accident, a mirror could be placed at position _____.
(A) E
(B) D
(C) G
(D) F

10. Three glasses P, Q and R having equal amount of water were taken and equal amount of salt was added to each one of them. After that, P was cooled, Q was heated and R was left undisturbed. Water in which glass will now taste most salty?
(A) P
(B) Q
(C) R
(D) All will taste the same.

11. Rohit's father experienced a heart attack. Doctor told him that his blood vessels have become narrower. What could be the reason for this?

(A) His diet has an excess of roughage and water.
(B) His diet lacks proper amount of vitamins and minerals.
(C) His diet has an excess of fats and carbohydrates.
(D) His diet lacks proper amount of proteins and carbohydrates.

12. Neutral insulator P is rubbed with neutral insulator Q. Insulator P becomes positively charged after the rub. Which of the following statements is correct?
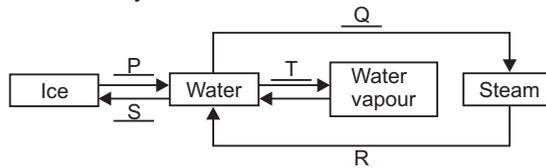(A) P loses some electrons to insulator Q.
(B) Q loses some electrons to insulator P.
(C) P gains positive charge from insulator Q.
(D) Q gains positive charge from insulator P.

13. We can recycle water by _____.
(A) Reusing the water from washing clothes to cook
(B) Discharging factory waste into canals and seas
(C) Discharging sewage and waste materials into the ocean
(D) Reusing the water from washing clothes to flush in toilets

ACHIEVERS SECTION

14. Observe the given diagram carefully and fill in the blanks.

	P	Q	R	S	T
(A)	Freezing	Boiling	Condensation	Melting	Evaporation
(B)	Freezing	Evaporation	Boiling	Melting	Condensation
(C)	Melting	Boiling	Condensation	Freezing	Evaporation
(D)	Melting	Evaporation	Condensation	Freezing	Boiling

15. Read the given passage.

Animals X, Y and Z are found in completely different habitats. Animal X is nocturnal and has developed many characters to conserve as much water as possible in the body. Animal Y has furry body with thick skin. It is large in size and has padded feet. Animal Z is adapted to live on trees, sticky pads on its feet help it to climb trees.

Which of the following can you conclude regarding the habitats of these animals?
(A) Animal X lives in a place with annual rainfall of about 80-100 cm.
(B) Animal Y lives in a place where days may be extremely hot and nights can be very cold.
(C) Animal Z lives in an area with annual rainfall of about 20-25 cm.
(D) Animal Y lives in an area where temperature sometimes reach 0°C or fall below it.

ANSWERS

NSO – 1. (C) 2. (B) 3. (C) 4. (C) 5. (A) 6. (B) 7. (D) 8. (D) 9. (B) 10. (B) 11. (C) 12. (A) 13. (D) 14. (C) 15. (D)

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