



**SOF NATIONAL
SCIENCE OLYMPIAD**

Total Questions : 35

Time : 1 hr.

PATTERN & MARKING SCHEME			
Section	(1) Logical Reasoning	(2) Science	(3) Achievers Section
No. of Questions	5	25	5
Marks per Ques.	1	1	2

SYLLABUS

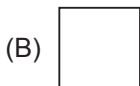
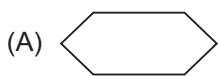
Section – 1 : Patterns, Alphabet Test, Coding-Decoding, Mirror Images, Embedded Figures, Geometrical Shapes and Solids, Ranking Test, Direction Sense Test, Days and Dates & Possible Combinations, Analogy and Classification.

Section – 2 : Plants, Animals, Food and Digestion, Human Needs, Matter and Materials, Force, Work and Energy, Our Environment, Earth and Universe.

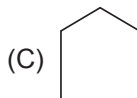
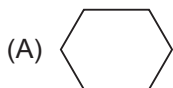
Section – 3 : Higher Order Thinking Questions - Syllabus as per Section – 2.

LOGICAL REASONING

1. Namita drew a figure having all equal sides. Which could be the figure she drew?



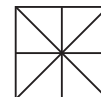
2. Which could be one of the faces of a cylinder?



3. The number of squares in the given figure is _____.

- (A) 5
(C) 4

- (B) 6
(D) None of these

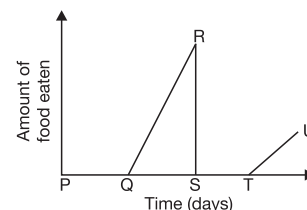


SCIENCE

4. Study the given graph carefully.

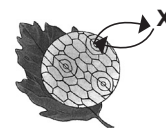
The line QR shows the _____ stage of the mosquito.

- (A) Egg
(B) Larval
(C) Pupal
(D) Adult



5. Refer to the given figure. Which of the following CANNOT be X?

- (A) Oxygen
(B) Carbon dioxide
(C) Water
(D) None of these

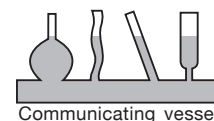


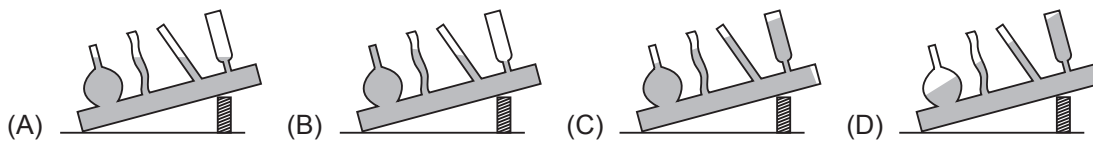
6. The energy that an object gets from its motion is

- (A) Electrical energy (B) Chemical energy (C) Kinetic energy (D) Potential energy.

7. Shashank filled a communicating vessel with water as shown in the picture.

Then he tilted the vessel to left by putting a block under its right end. Which of the following options is the best illustration to show the water level in the vessel?

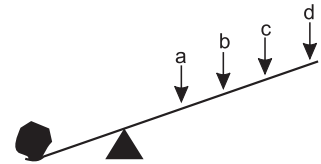




8. The festival of Holi marks the beginning of _____.
 (A) Autumn (B) Winter (C) Spring (D) Summer

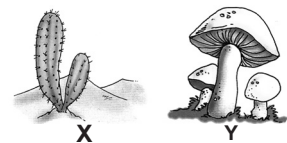
9. Arjun wants to lift the rock as shown in the figure. At which point should he apply the force so that he could lift the rock easily?

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



10. Which of the following statements hold true regarding X and Y?

- X depends partly on animals for food but can also make its own food while Y cannot make its own food.
 - X has chlorophyll while Y does not contain chlorophyll and is non-green.
 - In X, food is prepared by the green stem, whereas Y obtains its food from dead and decaying plants and animals.
 - X and Y have patches of green colour. Only green part of their leaves performs photosynthesis.
- (A) 1, 3 and 4 (B) 2 and 3 (C) 1 and 4 (D) 3 and 4



11. Which of the following teeth function in the same way as the object shown in the picture?

- (A) Incisors
 (B) Canines
 (C) Premolars
 (D) Both (A) and (B)



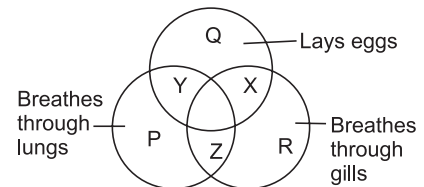
12. Amongst the given birds, which one has climbing claws with two toes in the front and two behind?



13. Study the given Venn diagram carefully.

Which letter represents the hen?

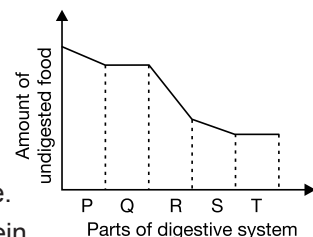
- (A) Y
 (B) X
 (C) Z
 (D) R



ACHIEVERS SECTION

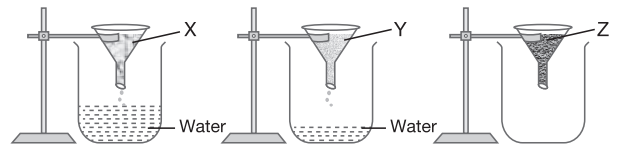
14. The given graph shows the changes in amount of undigested food as it progresses through the alimentary canal. Select the INCORRECT option regarding the parts labelled as P, Q, R, S and T.

- (A) Q and T are oesophagus and large intestine respectively.
 (B) P represents mouth where about 30% of carbohydrate is digested.
 (C) S is small intestine, where both digestion and absorption takes place.
 (D) R is stomach, the primary site of digestion of carbohydrate and protein.



15. 100 gms of three types of soil were put in a funnel and each funnel was put on an empty beaker using stands. Then 60 mL water was poured over each of them. The result is shown in the given figure. Identify the soil types and select the correct option.

- (A) X is clay and Y is loam.
- (B) Y is loam and Z is sand.
- (C) X is sand and Y is clay.
- (D) X is sand and Z is clay.



SPACE FOR ROUGH WORK

ANSWERS

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