



**SOF NATIONAL
SCIENCE OLYMPIAD**

Total Questions : 50

Time : 1 hr.

PATTERN & MARKING SCHEME			
Section	(1) Logical Reasoning	(2) Science	(3) Achievers Section
No. of Questions	10	35	5
Marks per Ques.	1	1	3

SYLLABUS

Section – 1 : Verbal and Non-Verbal Reasoning.

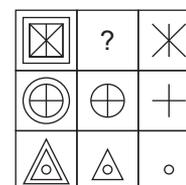
Section – 2 : Motion and Measurement of Distances, Light, Shadows and Reflections, Electricity and Circuits, Fun with Magnets, Our Environment (Water, Air Around us, Garbage in Garbage out), Sorting and Separation of Materials, Changes Around Us, The World of Living (Characteristics of Living Beings, 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

- X is to the South-West of Y, L is to the East of X and South-East of Y and M is to the North of L in a line with XY. In which direction of Y is M located?
(A) South
(B) South-West
(C) North
(D) North-East

- +
- ⊗
- ⊗
- ⊗

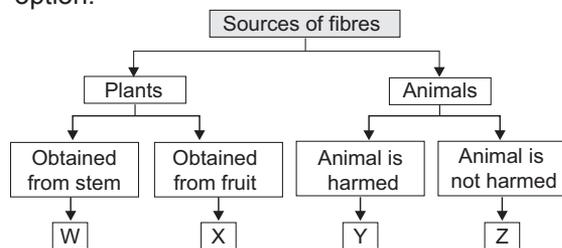


- Which of the following figures will complete the given figure matrix?

- If all the vowels are removed from the series given below, then which of the following is ninth to the right of twelfth letter from the right end?
Q E E E F E B U L A M C D I P Q O R R R A P P W I
(A) R (B) W
(C) I (D) P

SCIENCE

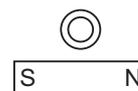
- Refer to the given flow chart and select the correct option.



- X – Flax, Y – Silk
 - W – Cotton, Y – Silk
 - W – Flax, Z – Wool
 - X – Jute, Z – Wool
- Which of the following joints is present between thigh bone and shin bone?
(A) Hinge joint (B) Pivot joint

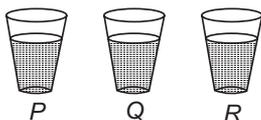
- Fixed joint (D) Ball and socket joint

- A small compass is placed beside the middle of a bar magnet.



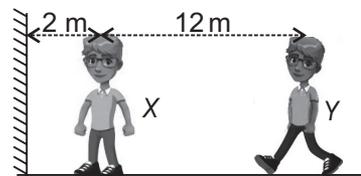
- In which direction will the compass needle point?
- ⊖
 - ⊙
 - ⊙
 - ⊖

- 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.

5 m towards boy X, then how far away would boy Y appear to be in the mirror to boy X?

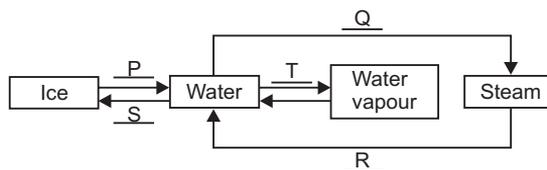


- (A) 9 m
 (B) 10 m
 (C) 11 m
 (D) 14 m

8. Two boys are standing in front of a plane mirror as shown in the given figure. If boy Y walks

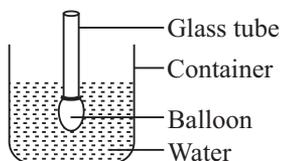
ACHIEVERS SECTION

9. 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 |

10. A balloon attached to a hollow glass tube was submerged in a container of water as shown here. Rohan



placed his mouth over the open end of the glass tube and blew air into it. He observed that the water level in the container rose. This experiment tells us that air _____.

- (i) has mass
 (ii) occupies space
 (iii) has a definite volume
 (iv) can be compressed
 (A) (i), (ii) and (iv) only
 (B) (ii) and (iii) only
 (C) (i) and (ii) only
 (D) (ii) only

SPACE FOR ROUGH WORK

ANSWERS

- NSO – 1. (D) 2. (D) 3. (D) 4. (C) 5. (A) 6. (D) 7. (B) 8. (C) 9. (C) 10. (C)