SCIENCE OLYMPIAD FOUNDATION

SAMPLE PAPER SYLLABUS 2016-17

CLASS **8**

NSO

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

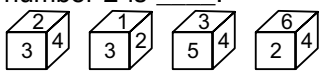
Section – 1 : Verbal and Non-Verbal Reasoning.

Section – 2 : Crop Production and Management, Microorganisms, Synthetic Fibres and Plastics, Metals and Non-metals, Coal and Petroleum, Combustion and Flame, Conservation of Plants and Animals, Cell, Reproduction and Endocrine System, Force and Pressure, Friction, Sound, Chemical Effects of Electric Current, Some Natural Phenomena, Light, Stars and the Solar System, Pollution of Air and Water.

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

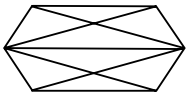
LOGICAL REASONING

1. A dice has numbers 1, 2, 3, 4, 5 and 6 on its faces. Four positions of the dice are as shown below. The number on the face opposite to the face with number 2 is ____.



(A) 6 (B) 5
(C) 4 (D) 1

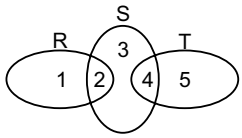
2. Find the number of triangles in the given figure.



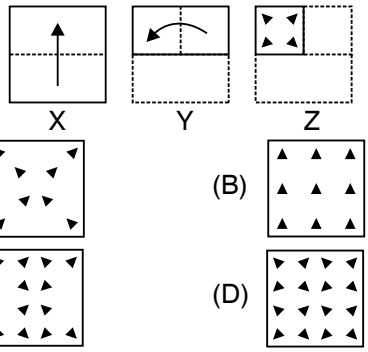
(A) 12 (B) 13
(C) 16 (D) 10

3. In the given diagram, R represents businessmen, S represents rich men and T represents honest men. Which number will represent honest rich men ?

(A) 2
(B) 3
(C) 5
(D) 4



4. There is a set of three figures X, Y and Z, showing a sequence in which a paper is folded and finally cut from a particular section. Select the figure from the options which most closely resembles the unfolded form of fig(Z).



5. If BJP is coded as DMK, how can RSS be written in that code?

(A) CPI
(B) TVN
(C) SJP
(D) TDP

SCIENCE

6. Which of these is a likely function of a centriole?

(A) To hold the fibres of spindle
(B) To send messages to the nucleus to divide
(C) To divide the cytoplasm
(D) To cause the chromosomes to become shorter and thicker

7. Arrange the following planets in increasing order of time required to complete one revolution around Sun.

(i) Earth (ii) Uranus
(iii) Mars (iv) Jupiter
(A) (i), (ii), (iii), (iv) (B) (i), (iii), (iv), (ii)
(C) (iv), (iii), (ii), (i) (D) (ii), (iii), (i), (iv)

8. When a glass rod is rubbed with a piece of silk cloth
(A) Both cloth and the rod acquire positive charge
(B) Rod becomes positively charged while the cloth has a negative charge
(C) Rod becomes negatively charged while the cloth has a positive charge
(D) Both cloth and the rod acquire negative charge.

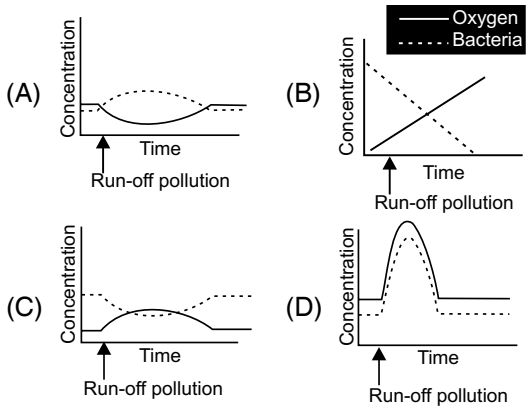
9. A body immersed in a fluid experiences an upward thrust which depends on
(A) The weight of the fluid displaced by it
(B) The volume of the body
(C) The mass of the body
(D) All of these.

10. When Cu is exposed to moist air for a long time, which of the following is formed?
(A) $Cu(OH)_2$ (B) $CuCO_3$
(C) Both (A) and (B) (D) Cu_2O

11. Which of the following materials is the best for making garments and jackets that can be used in wet or damp environments?
(A) Polyester (B) Wool
(C) Cotton (D) None of these.

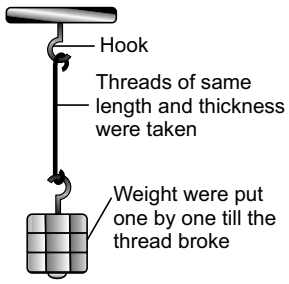
12. Some basic steps are needed in agricultural practice, which are listed here from 1 to 7. Which of the following options shows the right sequence?
(1) Preparation of the soil
(2) Harvesting (3) Irrigation
(4) Broadcasting (5) Tilling
(6) Weeding (7) Manuring
(A) 1, 5, 4, 7, 3, 6, 2 (B) 1, 3, 5, 6, 4, 2, 7
(C) 1, 3, 5, 2, 4, 6, 7 (D) 1, 5, 6, 2, 4, 7, 3

13. Run-off pollution of a particular river resulted from overuse of chemical fertilizers by a nearby farm. Which of the following graphs correctly shows the resulting changes in levels of oxygen and bacteria in this river?



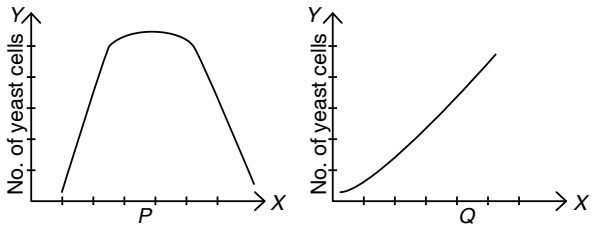
ACHIEVERS SECTION

14. Anuj has performed an experiment to compare the strength of different fibres. He arranged the set-up as shown in figure :



Arrange the threads in order of their increasing strength.
(A) Nylon < Silk < Cotton
(B) Silk < Cotton < Nylon
(C) Cotton < Nylon < Silk
(D) Cotton < Silk < Nylon

15. Swati was studying growth of yeast under different conditions of environment. She plotted two graphs but forgot to label the *X* axes of the graphs. Analyse the given graphs and select the correct option.



(A) The environmental factor studied in graph *P* can be pH and in graph *Q* can be temperature.
(B) The environmental factor studied in graph *P* can be temperature and in graph *Q* can be sugar concentration in medium.
(C) The environmental factor studied in graph *P* can be temperature and in graph *Q* can be pH.
(D) The environmental factor studied in the graph *P* can be sugar concentration in medium and in graph *Q* can be pH.

SPACE FOR ROUGH WORK

ANSWERS

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