STAR OLYMPIAD FOUNDATION

SAMPLE PAPER

INTERNATIONAL SCIENCE OLYMPIAD- CLASS IX

1. The position of a particle moving along a straight along a straight line are $x_1 = 50$ m at 10.30 a.m and $x_2 = 55$m at 10.35 a.m respectively. What is the displacement of the particle between 10.30 a.m. and 10.35 a.m.?

   (A) 2m (B) 5 m (C) 7m (D) 9 m

   Answer: (B)

   $S = x_2 - x_1 = 55 - 50 = 5$ m

.....

2. A rectangular iron block is placed over a table in different ways such that different face touches the table. In all these cases, which of the following can be concluded?

   (A) The block exerts the same thrust and different pressures.
   (B) The block exerts the same thrust and same pressures.
   (C) The block exerts the different thrust and same pressures.
   (D) The block exerts the different thrust and different pressures.

   Answer: (A)

   The block exerts the same thrust and different pressure, as weight of the iron block remains the same. But the pressures exerted in different ways are different.

.....

3. A colloidal solution of emulsion is

   (A) Solid dispersed in solid.
   (B) Gas dispersed in liquid.
   (C) Liquid dispersed in solid.
   (D) Liquid dispersed in liquid.

   Answer: (D)

   An emulsion is a type of colloidal solution of a liquid dispersed in another liquid which is not miscible with it. E.g., milk, face cream, etc.

.....

4. Sulphur molecule exists as S_8. How many moles of sulphur are present in 25.6 grams of sulphur?

   (A) 0.01 moles (B) 0.1 moles (C) 0.02 moles (D) 0.2 moles.

   Answer: (B)

   1 mole of sulphur molecule = 32 x 8 = 256 g

   25.6 g of sulphur has = $\frac{25.6}{256}$ = 0.1 moles

.....

5. What is 'autolysis'?

   (A) Self – replication
   (B) Self – food producer
   (C) Self – digestion
   (D) Food decomposer

   Answer: (C)

Lysosomes are organelles that contain digestive enzymes (acid hydrolases).

.....

6. What does G. M. O stand for?
   (A) Genetically Modified Organisms.
   (B) Growth Maturity Order
   (C) Good Maturing Offspring
   (D) Gold Medal Order

Answer: (A)

G. M. O stands for Genetically Modified Organisms.

.....