10th International Olympiad of Science 2018

Organized by: SOCIETY OF SCIENCE EDUCATION
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FOR SUPREMACY IN SCIENCE
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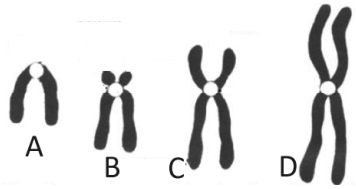
Presented by: SILVER ZONE FOUNDATION NEW DELHI - INDIA

CLASS 9th SYLLABUS & SAMPLE QUESTIONS

Matter; Atoms and Molecules; Cells; Tissues; Diversity in Living Organisms; Force and Motion; Gravitation; Work, Energy and Sound; Why Do We Fall Ill; Natural Resources; Improvement in Food Resources; Mental Aptitude and Reasoning.

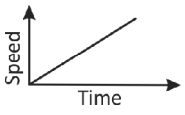
The Actual Question Paper Contains 50 Questions. The Duration of the Test Paper is 60 Minutes.

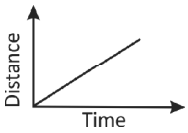
1. Which one of the following is the acrocentric chromosome?

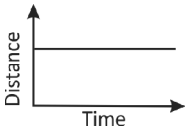


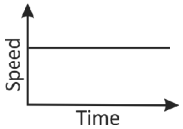
(A) A
(B) B
(C) C
(D) D
(E) None of these

2. Which one of the following graphs shows uniform acceleration?

(A) 

(B) 

(C) 

(D) 

(E) None of these

3. Choose the isobar from the following.

(A) $^{6}C_{12}$ and $^{6}C_{14}$ (B) $^{92}U_{235}$ and $^{92}C_{238}$
(C) $^{1}H_{1}$ and $^{1}C_{2}$ (D) $^{18}Ar_{40}$ and $^{20}Ca_{40}$
(E) None of these

4. Humans are classified according to the following hierarchy:

Animalia → Chordata → Mammalia → Primates → Hominidae → Homo → Sapiens

Which category is represented by Primates in the above hierarchy?

(A) Order (B) Genus
(C) Kingdom (D) Family
(E) None of these

5. What is the number of water molecules contained in a drop of water weighing 0.12 g?

(A) 2.007×10^{21}
(B) 4.014×10^{21}
(C) 2.007×10^{22}
(D) 4.014×10^{22}
(E) None of these

6. Calculate the number of molecules of chloroform ($CHCl_3$)weighing 0.0239 g (H =1, C=12, Cl=35.5).

(A) 0.2046×10^{17} (B) 1.2046×10^{20}
(C) 2.2046×10^{22} (D) 3.1046×10^{21}
(E) None of these

7. A student has three cubes, one is steel cube with 40 g mass and 100 cm^3 volume, second is silver cube with 30 g mass and 10 cm^3 volume, and third is iron cube with 80 g mass and 100 cm^3 volume. Compare the cube and find out which one of the following cube has the highest density?

(A) Steel cube has highest density
(B) Iron cube has highest density
(C) Silver cube has highest density
(D) Steel and silver has same density
(E) None of these

8. Which one of the following statements correctly describes the relationship between the buoyant force and an object in fluid?

(A) The buoyant force is equal to the volume of the fluid that the object displaces.
(B) The buoyant force is equal to the density of the fluid that the object displaces.
(C) The buoyant force is equal to the volume of the fluid that the object displaces.
(D) The buoyant force is equal to the weight of the fluid that the object displaces.
(E) None of these

9. Which one of the following shows that cathode rays are negatively charged particles?

(A) Cathode rays produce greenish light on striking the wall of discharge tube
(B) Cathode rays cast shadows of the objects placed in their path
(C) Cathode rays move the blades of a paddle wheel placed in their path
(D) Cathode rays are deflected towards the positive plate of an electric field
(E) None of these

10. Classify the following materials into elements, compounds and mixtures:
Methane, granite, blood, sodium, silver, iron, sugar

(A) **Elements:** Sodium and silver
Compounds: Methane, Granite, sugar
Mixtures: Iron, blood
(B) **Elements:** Sodium, silver, iron,
Compounds: Methane, sugar
Mixtures: Granite, blood
(C) **Elements:** Sodium, silver, iron,
Compounds: Methane, blood
Mixtures: Granite, sugar
(D) **Elements:** Methane, silver, iron,
Compounds: Sodium, sugar
Mixtures: Granite, blood
(E) None of these

ANSWERS

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