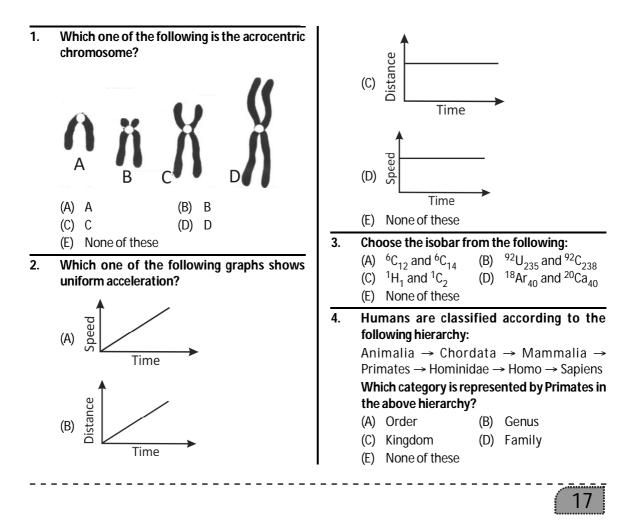


resources, General & applied science

The Actual Question Paper Contains 40 Questions. The Duration of the Test Paper is 60 Minutes.



International Olympiad of Science - iOS'14

- 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. Speed of a car increases from 20 km/h to 50 km/h. What is its acceleration?
 - (A) 0.83 m/s² (B) 1.8 m/s²
 - (C) 1.3 m/s² (D) 0.083 m/s²
 - (E) None of these
- 7. A student has three cubes, one is steel cube with 40 g mass and 100 cm³ volume, second is silver cube with 30 g mass and 10 cm³ volume, and third is iron cube with 80 g mass and 100 cm³ 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

18

- 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 element into 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



