DPP-02

Only one correct:

1. For the element X, student Surbhi measured its radius as 102 nm, Mr.Gupta as 113 nm and Mr. agarwal as 100 nm using same apparatus. Their teacher explained that measurements were correct by saying that recorded values by three students were

(A) Crystal, vander Waal and covalent radii

(B) Covalent, crystal and vander Waal radii

(C) Vander Waal, ionic and covalent

(D) None is correct

2. Which of the following combination contains only isoelectronic series :

(A) $N^{3-}, O^{2-}, Cl^{-}, Ne$ (B) $F^{-}, Ar, S^{2-}, Cl^{-}$

(C) $P^{3-}, S^{2-}, Cl^{-}, Ar$ (D) $N^{3-}, F^{-}, O^{2-}, Ar$

3. Which among the following species has the same number of electrons in its outermost as well as penultimate shell ?

(A) Mg^{2+} (B) O^{2-} (C) F^{-} (D) Ca^{2+}

4. The specie having smallest ionic radius is :-

(A) Al^{3+} (B) Ba^{2+} (C) K^{+} (D) Mg^{2+}

More than one correct:

5. The correct order of radii is:

(A) $N < Be < B$ (B) $F^{-} < O^{2-} < N^{3-}$ (C) $Na > Li < K$ (D) $Fe^{2+} > Fe^{3+} > Fe^{4+}$

6. Choose the correct statement.

(A) Be and Al are not in same group.

(B) All the transition metal correspond to d-block.

(C) Be and Al are having lot of similarities in their properties.

(D) The atomic radius gradually decreases from Sc to Zn.

Subjective :

7. A monoatomic anion of unit charge contain 45 neutrons and 36 electrons. What is atomic mass number of element and in which group of periodic table does it lie.

8. Arrange in decreasing order of atomic size : Na, Cs, Mg, Si, Cl.

9. In the ionic compound KF, the K^{+} and F^{-} ions are found to have practically radii, about 1.34Å each. What do you predict about the relative covalent radii of K and F ?

10. Which one of the following pair would have a large size :

(i) K or K^{+} **(ii)** Br or Br **(iii)** O^{2-} or F^{-} **(iv)** Li^{+} or Na^{+}

(v) P or As **(vi)** Na^{+} or Mg^{+2}

ANSWER KEY

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1. A **2.** C **3.** D **4.** A **5.** BCD **6.** ABC

7. Atomic mass No. 80, Group No. 17

8. (Cs > Na > Mg > Si > CI) **9.** $(r_k > 1.34Å > r_F)$

10. **(i)** K **(ii)** Br^- **(iii)** O^{2-} **(iv)** Na^+ (v) As (vi) Na^+]