

NOTE: Attempt all questions of Section-A by filling the corresponding bubble on the MCQ ANSWER SHEET and return it to the Superintendent within given time, even if you have not attempted any question.

SECTION-A

Time: 20 Minutes

Marks: 12

1. Dental amalgam (Hg in Ag) is the type of solution. A) solid in solid, B) liquid in liquid, C) solid in liquid, D) liquid in solid
2. Which of the following is a weak electrolyte? A) H_2SO_4 , B) HCl, C) CH_3COOH , D) NaOH
3. The halogen present in solid form is A) chlorine, B) fluorine, C) bromine, D) iodine
4. The chemical bond in NaCl is bond. A) coordinate, B) covalent, C) ionic, D) metallic
5. An atom with a charge is called A) an electron, B) a molecule, C) a proton, D) an ion
6. Existence of an element in more than one crystalline form is called A) allotropy, B) isotropy, C) phototropy, D) polymorphism
7. An electron in its ground state does not A) spin, B) revolve, C) radiate energy, D) reside in orbit
8. Atomic size decreases from left to right in a period. This is because of is added in nucleus. A) electron, B) proton, C) neutron, D) positron
9. The modern periodic table is based on A) atomic number, B) mass number, C) atomic mass, D) isotopes number
10. "Lead" is a metal which is represented by the symbol A) Pb, B) Sn, C) Au, D) Hg
11. Which of the following is a homogeneous mixture? A) smoke, B) air, C) fog, D) smog
12. Protium (H) and Deuterium (D) are the of hydrogen. A) isotopes, B) isobars, C) isotropes, D) isoforms

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CHEMISTRY — 9th

Time: 2 Hours 40 Minutes

SECTION-B

Marks: 32

1. Attempt any eight of the following. All carry equal marks.
 - i. Differentiate between empirical formula and molecular formula.
 - ii. Give four uses of isotopes.
 - iii. Why is an atom considered as a neutral particle?
 - iv. Discuss atomic size along with its trends in periodic table.
 - v. How will you differentiate between representative and transition elements?
 - vi. Give any four physical properties of ionic compounds.
 - vii. What is electron-sea model of metallic bond?
 - viii. What is allotropy? Give two reasons due to which allotropy occurs.
 - ix. Differentiate between solution and colloids with examples.
 - x. NaOH is strong but NH_4OH is weak electrolyte. Why?
 - xi. Write down four uses of sodium.

SECTION-C

Marks: 21

NOTE: Attempt any three of the following questions. All questions carry equal marks.

2.
 - i. What is electronic configuration? Give electronic configuration of: Na^{11} & Cl^{17}
 - ii. What is mass of 5 moles of ice?
3.
 - i. What is electron affinity? Explain its trends in periodic table.
 - ii. Draw the Lewis structures of the following molecules: HCl , CCl_4 , NH_3
4.
 - i. Discuss Charles law and verify it graphically.
 - ii. Explain molarity along with its unit.
5.
 - i. What is corrosion? Explain rusting of iron as an example.
 - ii. Give the chemical reactions of "Na" with: H_2O , Cl_2 , S