ICSE Class 10 Chemistry – Mock Board Examination (2026) **Solved Paper**

Section I – Answers

Q1. MCQ

1. (b) Hydrogen
2. (c) Galvanization
3. (b) 2
4. (c) Hydrochloric acid
5. (b) 7
6. (b) Ionic
7. (c) Carboxylic acids
8. (b) Hydrogen
9. (b) Bauxite
10. (c) H ,

Q2. Fill in the blanks

1. (NH „) ,SO „
2. Quicklime
3. Carbon dioxide
4. Oxidation
5. Hydrated iron(III) oxide (Fe ,O ƒ·xH ,O)

Q3. True/False

1. False
2. True
3. True
4. False
5. True

Q4. Match the following

(i) NaOH !’ (b) Caustic soda
(ii) CaOCl , !’ (a) Bleaching powder preparation
(iii) H ,SO „ !’ (c) Oil of vitriol
(iv) NH „OH !’ (d) Laboratory reagent for alkalis
(v) Phenolphthalein !’ (e) Turns pink in base

Q5. Short answers

1. **Oxidation**: loss of electrons. Example: Zn !’ Zn² z + 2e {
   Reduction: gain of electrons. Example: Cu² z + 2e { !’ Cu
2. Balanced equations:
   (i) 2Mg + O , !’ 2MgO
   (ii) Zn + H ,SO „(dil.) !’ ZnSO „ + H ,!‘
3. Ionic vs Covalent (any two):
   - Ionic compounds have ions; covalent have molecules.
   - Ionic compounds conduct electricity in molten/aqueous state; covalent generally do not.
   - Ionic usually have high m.p./b.p.; covalent generally lower.
4. Conc. H ,SO „ removes water from compounds (dehydrating agent).
   Example: C • ,H , ,O • • !’ 12C + 11H ,O (sugar charring in presence of conc. H ,SO „)
5. **Electroplating**: depositing a thin layer of one metal on another using electrolysis.
   Uses: chrome plating on car parts, silver plating on cutlery, gold plating on jewelry.

Section II – Model Answers (Any Four)

Q6

1. **Acid**: gives H z in water (e.g., HCl).
   Base: gives OH { in water (e.g., NaOH).
   Salt: formed by acid-base neutralization (e.g., NaCl).
2. **pH** is a measure of H z concentration.
   Acidic: <7, Basic: >7, Neutral: 7.
3. From NaCl:
   (i) To NaOH (chlor-alkali process):
   2NaCl + 2H ,O !' 2NaOH + Cl , + H ,
   (ii) To HCl gas:
   NaCl + H ,SO „(conc.) !' NaHSO „ + HCl!'

Q7

1. Endothermic absorbs heat; exothermic releases heat.
   Combination: two/more substances form one product.
   Decomposition: one substance breaks into simpler substances.
2. Displacement reaction: more reactive metal displaces less reactive metal.
   Fe + CuSO „ !' FeSO „ + Cu
3. Ionic equation for neutralization:
   H z + OH { !' H ,O

Q8

1. **Metallurgy**: extraction of metals from ores. Steps: concentration, roasting/calcination, reduction, refining.
2. Aluminium is above carbon in reactivity series; Al ,O ƒ is very stable, so electrolysis is used.
3. Reasons:
   (i) Gold is least reactive !' occurs native.
   (ii) Zinc protects iron from rusting (sacrificial protection).
   (iii) Alloys improve hardness, strength, corrosion resistance.

Q9

1. Electron dot structures:
   H ,O: O with two lone pairs and two shared pairs with H.
   NH ƒ: N with one lone pair and three shared pairs with H.
2. **Valency**: combining capacity of an atom.
   Oxidation number: apparent charge on atom in a compound.
3. Molecular masses:
   (i) CaCO ƒ = 40 + 12 + (3×16) = 100
   (ii) H ,SO „ = (2×1) + 32 + (4×16) = 98

Q10

1. Names/uses:
   Ethanol – solvent/fuel; Ethanoic acid – vinegar/preservative;
   Methane – fuel; Propanone (acetone) – solvent.
2. **Homologous series**: family of compounds with same functional group and general formula; successive members differ by –CH ,–; similar chemical properties; gradation in physical properties.
3. Saturated hydrocarbons: single bonds only (e.g., ethane).
   Unsaturated hydrocarbons: double/triple bond present (e.g., ethene).