TEST PAPER: CHEMISTRY

Time: 70 Minutes **Class:** ICSE 9th

Max. Marks: 50 Marks **Date:** 24th July, 2018

Marking Scheme: *Questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.*

Question 1:

A. i. Chemical formula of Zinc Hydroxide is
   (a) $Zn(OH)_2$
   (b) ZNO_2
   (c) $Zn_2(OH)_3$
   (d) ZnOH

   ii. All of these radicals have a valency of 2, except
   (a) SO_4
   (b) CO_3
   (c) NH_4
   (d) Mg

   iii. In CuO (Copper Oxide), valency of Copper is
   (a) $+1$
   (b) $+2$
   (c) -1
   (d) -2

B. Write down the valency of underlined ion/radical:
   i. Aluminium Sulphate
   ii. Ammonium Hydroxide
   iii. Sodium Carbonate

C. Define:
   i. Symbol
   ii. Chemical Formula
   iii. Radicals
   iv. Chemical equation

Question 2:

A. Formula of Oxide of an element X is X_2O_3
   i. What is the valency of element X
   ii. What is the formula of Carbonate of the element X
   iii. What is the formula of Hydroxide of the element X

B. MCl_3 is the formula of Chloride of an element M
   i. What is the valency of element M
   ii. What is the formula of Carbonate of the element M
   iii. What is the formula of Hydroxide of the element M

C. Balance the following reactions:
   i. $\_\ PCl_5 + \_\ H_2O \rightarrow \_\ H_3PO_4 + \_\ HCl$
   ii. $\_\ Hg(OH)_2 + \_\ H_3PO_4 \rightarrow \_\ Hg_3(PO_4)_2 + \_\ H_2O$

Question 3:

A. Formula of Oxide of an element Y is Y_2O
   i. What is the valency of element Y
   ii. What is the formula of Carbonate of the element Y
   iii. What is the formula of Hydroxide of the element Y

B. Write the chemical formula of the following compounds
   i. Ammonium Nitride
   ii. Ammonium Nitrite
   iii. Ammonium Nitrate
C. Balance the following reactions:
   i. $\_\ Ba_3N_2 + \_\ H_2O \rightarrow \_\ Ba(OH)_2 + \_\ NH_3$
   ii. $\_\ CaCl_2 + \_\ Na_3PO_4 \rightarrow \_\ Ca_3(PO_4)_2 + \_\ NaCl$

Question 4:

A. Form and balance the following word equations:
   i. Calcium + Water → Calcium Hydroxide + Hydrogen
   ii. Magnesium + Hydrochloric Acid → Magnesium Chloride + Hydrogen
B. Write the chemical formula of the following compounds
   i. Copper (II) Oxide
   ii. Lead (III) Oxide
   iii. Magnesium Sulphite
C. Balance the following reactions:
   i. $\_\ FeS + \_\ O_2 \rightarrow \_\ Fe_2O_3 + \_\ SO_2$
   ii. $\_\ CO + \_\ H_2 \rightarrow \_\ C_8H_{18} + \_\ H_2O$

Question 5:

A. Name any two elements which exhibit variable valency also state their valency.
B. An element A has valency (+y) and element B has valency (-x)
   i. Write the formula of the compound formed between A and B
   ii. Write the formula of the Chloride of element A
   iii. Write the formula of Oxide of element B
C. Write the chemical formula of the following compounds
   i. Sodium Sulphide
   ii. Sodium Sulphite
   iii. Sodium Bi-Sulphite
   iv. Sodium Bi-Sulphate