Final Term Examination 2017-2018

Std. : VII **Full Marks : 80**

Subject : Chemistry **Time :**

SECTION — A [40 Marks]

(All questions are compulsory)

I. (1) Name the following : **[10]**

(a) The force that holds any two atoms to form a new substance.

(b) The type of reaction in which two or more substances add up to form a new product.

(c) A substance that gives different colours in acidic and basic medium.

(d) The acid present in vinegar.

(e) Water fit for drinking.

(f) The process by which water balance is maintained on earth.

(g) The temperature at which water has maximum density.

(h) A chemical that is used to kill fungi.

(i) A solvent which makes the paint more fluid.

(j) A chemical that is used to kill unwanted vegetation.

(2) Write the chemical formulae for the followings : **[5]**

(a) Calcium nitrate (b) Sodium hydroxide

(c) Potassium chloride (d) Aluminium nitride

(e) Zinc Sulphide

(3) Balance the following chemical equations : **[5]**

(i) $N_2 + H_2 \longrightarrow NH_3$

(ii) $Pb(NO_3)_2 \longrightarrow PbO + NO_2 + O_2$

(iii) $KCl + O_2 \longrightarrow KClO_3$

(iv) $Ag_2O \longrightarrow Ag + O_2$

(v) $Hg + O_2 \longrightarrow HgO$

(4) Write the chemical name for the following : **[5]**

(i) $CuSO_4$ (ii) Na_2O (iii) AgCl (iv) FeS (v) $MgCO_3$

(5) Fill in the blanks :— **[8]**

(i) Fats are saponified to make _____

(ii) _____ are made from some petroleum products.

(iii) Pure water is _____ and odourless.

(iv) Thermal pollution leads to a _____ in the dissolved oxygen of the water body.

(v) _____ bases are called alkalis.

(vi) An acid salt can be formed by a _____ acid.

(vii) In a _____ re action one substance breaks down into two or more simpler substances.

(viii) _____ is used in the purification of water.

(6) Complete the following table : **[7]**

Name of the compound	Basic radical	Acid radical
Sodium Sulphate	_____	_____
Hydrogen chloride	_____	_____
Zinc Oxide	_____	_____
Lead II chloride	_____	Cl^-

SECTION — B [40 Marks]

(Answer any four questions)

II. (i) Define neutralisation reaction. Give one example. [2+1]

(ii) Complete the following table : [7]

Indicator	Solution	Colour
(a) Litmus	Lemon juice	_____
(b) Phenolphthalein	Ammonium hydroxide	_____
(c) Phenol phthalein	Hydrochloric acid	_____
(d) Turmeric juice	Soap solution	_____
(e) Turmeric juice	Orange juice	_____
(f) Red-cabbage juice	Soap solution	_____
(g) Red-cabbage juice	Hydrochloric acid	_____

III. (i) What is eutrophication ? [2]

(ii) Match the polymers mentioned in Column A with the items mentioned in Column B. [5]

	A	B
(a)	Polythene	Pipe
(b)	Nylon	Carrybag
(c)	PVC	Crockery
(d)	Melamine	Nonstick kitchenware
(e)	Teflon	Fibre

(iii) What do you mean by softening of water ? Name two methods which are used to soften water. [1+2]

IV. (i) Identify the acid salts and the normal salts among the following : [3]

(a) Na_2CO_3 (b) $CaSO_4$ (c) $KHCO_3$

(d) $NaHSO_4$ (e) Na_2HPO_4 (f) $(NH_4)_2\ CO_3$

(ii) Complete the following reactions : [3]

(a) H_2SO_4 + _____ $\longrightarrow$ $CuSO_4 + H_2O$

(b) $HNO_3 + NH_4OH \longrightarrow$ _____ $+ H_2O$

(c) $3HCl$ + _____ $\longrightarrow AlCl_3 + 3H_2O$

(iii) What would you observe in the following cases ? [4]

(a) An iron knife is placed in a solution of copper II sulphate.

(b) Carbondioxide is passed through limewater.

(c) Magnesium ribbon is ignited in air.

(d) An aqueous solution of silver nitrate is mixed with sodium chloride solution.

IV. (i) Identify the type of chemical reactions for the followings :— [4]

(a) $3Ca + N_2 \longrightarrow Ca_3\ N_2$

(b) $2H_2O \longrightarrow H_2 + O_2$

(c) $Mg + 2HCl \longrightarrow MgCl_2 + H_2$

(d) $BaCl_2 + Na_2SO_4 \longrightarrow BaSO_4 + 2NaCl$

(ii) What is the valency of the underlined element or radical in each of the following compounds: [4]

(a) $\underline{P}\ Cl_3$ (b) $\underline{Cu}Cl_2$ (c) $Fe_2\underline{O_3}$ (d) $\underline{Ca}O$

(e) $K\underline{HSO_4}$ (f) $\underline{Fe}O$ (g) $Ca\underline{CO_3}$ (h) $\underline{Na}HCO_3$

(iii) Name one inorganic and one organic acid. [2]

VI. (i) How does soap behave with soft water and hard water ? [2]

(ii) What do you mean by anomalous expansion of water ? [2]

(iii) Wha is NPK fertilizer ? Why should pesticides be used judiciously ? [2]

(iv) Name two water borne diseases along with the microorganisms causing them. [2]

(v) What is the basicity of the following acids ? [2]

H_2SO_4, HNO_3, H_3PO_4, HCl

VII. (i) Write differences between the followings. (two) [2+2]

(a) Acid and Base

(b) Hard water and soft water.

(ii) Draw the electron dot diagram for $^{16}_{7}N$ [2]

(iii) Write one use for the following salts : [2]

(a) Calcium sulphate (b) Potassium nitrate

(iv) Give reasons :— [2]

(a) Hard water is unfit for laundries.

(b) Luminous paints are used in marking signs on road.