(b) What happens when sodium hydroxide is made to react with ferrous sulphate. [2]

(c) Complete the table :- [6x½=3]

	Elements	Electronic Configuration	Valence Electrons	Valency
i)	$_{11}Na$	——	——	——
ii)	$_{17}Cl$	——	——	——

(d) Complete the given table :- [6x½=3]

	Element/Iron	Atomic No.	Protons	Neutrons	Electrons
i)	$^{39}_{19}K^{+}$	19	(1)_____	(2)_____	(3)_____
ii)	$^{35}_{17}Cl^{-}$	(4)_____	____17__	(5)_____	(6)_____

Half Yearly Examination 2018-2019
Chemistry

Class : VIII

Time : 2 hrs. + 15 Mins. **Full Marks : 80**

Section A [40 Marks]
Attempt all questions.

Question - 1

(a) Fill in the blanks :- [5]

(i) _____ displaces hydrogen from hot concentrated acids only.

(ii) Carbon due to its property of _____ has maximum tendency to form chain.

(iii) Isotopes of same element have the same _____ number but different _____ number.

(iv) Nuclear wastes release high energy radiations which can cause _____.

(b) Write the chemical name of the following :— [5]

(i) NaF (ii) $CuSO_4$ (iii) Al_2S_3

(iv) $Mg(OH)_2$ (v) FeO

(c) Balance the following chemical equations :- [5]

(i) $NH_3 + H_2SO_4 \longrightarrow (NH_4)_2SO_4$

(ii) $HgS + O_2 \longrightarrow HgO + SO_2$

(iii) $Ag_2O \longrightarrow Ag + O_2$

(iv) $Na + H_2O \longrightarrow NaOH + H_2\uparrow$

(v) $Fe_2O_3 + H_2 \longrightarrow Fe + H_2O$

{Turn Over}

(d) Write the chemical formulae of the following compounds : [5]

(i) Barium hydroxide

(ii) Magnesium nitride

(iii) Potassium permanganate

(iv) Sodium bisulphate

(v) Cobalt nitrate

(e) Name the following :- [5]

(i) One allotrope of carbon that is a good conductor of electricity.

(ii) The gas that lends fizziness to cola drinks.

(iii) A highly poisonous gas used in chemical warfare.

(iv) The scientist who discovered Radiu and Polonium.

(v) One allotropic form of carbon whose molecular structure looks like a football.

(f) What do you observe when :- [5]

(i) Copper carbonate is heated.

(ii) Zinc is treated with diulute hydrochloric acid.

(iii) Copper sulphate crystals are heated.

(iv) Dilute hydrochloric acid is added to marble chips.

(v) Carbondioxide is bubbled through lime water.

(g) Calculate the relative molecular mass of the following compounds :- [4]

(i) $Ca(NO_3)_2$ (ii) $(NH_4)_3\ PO_4$

Given atomic mass ; Ca = 40, N = 14, O = 16, H = 1, P = 31

Question - 5

(a) Differentiate between diamond and graphite on the basis of :- [3]

(i) Physical state (ii) hardness

(iii) specific gravity.

(b) State giving a reason whether the underlined substance is getting oxidised or reduced. [4]

(i) $\underline{PbO} + CO \longrightarrow Pb + CO_2$

(ii) $\underline{2Mg} + CO_2 \longrightarrow 2Mg\ O + C$

(c) Write the composition of subatomic particles of the sulphur atom, given the symbol $^{32}_{16}S$. [3]

Question - 6

(a) How are the following dried and collected in the laboratory? [4]

(i) CO_2 (ii) CO

(b) An atom has 12 electrons and 12 neutrons. Find its atomic number and mass number. Also represent the atom symbolically. [3]

(c) Graphite finds its usage in the following ways. Why ? [3]

(i) As a lubricant for machine parts.

(ii) In the manufacture of electrodes.

(iii) In nuclear reactors as moderators.

Question - 7

(a) Give balanced equation for the action of heat on $Na_2CO_3.10H_2O$. [2]

{Turn Over}

(h) Mention whether the following compounds are soluble or insoluble. (Based on the solubility chart). [4]

(i) KCl (ii) $CaCO_3$

(iii) $NaNO_3$ (iv) $CaSO_4$

(i) List any two safety measures that must be adopted while handling nuclear substances. [2]

Section B [40 Marks]

Attempt any four questions.

Question - 2

(a) Answer the following :-

(i) Name the two hydrogen isotopes that combine to form helium atom. [2]

(ii) Where does the above process occur naturally. [1]

(iii) What is the significance of above process. [2]

(iv) Name the process. [1]

(b) Explain : - [4]

(i) Carbon monoxide is used in metallurgy.

(ii) A blue flame is often observed on the top of a coal fire.

Question - 3

(a) State whether the following are true or false; if false then correct the statement. [2]

(i) If diamond is heated above 1500^{O}C in absence of air, it is transformed into graphite.

(ii) Diamond is opaque to X-rays.

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(ii) $C + CO_2 \longrightarrow$

(c) Name the following :- [4]

(i) An oxide that is yellow and fuses with the test tube on heating.

(ii) A black solid that is an oxidising agent.

(iii) Two radioactive substances.

Question - 4

(a) $_8X^{16}$, $_{13}X^{27}$, $_{18}X^{40}$ represent atoms of three elements; [3]

Which atom has the tendency to

(i) lose electrons.

(ii) gain electrons.

(iii) neither lose nor gain electrons.

(b) List any two uses of radioactivity. [2]

(c) Classify the following examples of a physical chemical or both the kinds of changes. [3]

(i) Milk sours,

(ii) A pellet of sodium is sliced into two.

(iii) Sodium hydroxide dissolves in water.

(d) It is dangerous to sleep in an ill-ventilated room with a coal fire burning. [2]

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