Chemistry Part-I

Fic. No. _____

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Chemistry Part-I

SECTION "A"

Time: 20 Min   Marks: 18

NOTE:Use this sheet for this section. No marks will be awarded for cutting, erasing or overwriting.

Q1.Choose the correct answer from the given choices i.e. (a, b, c, d) and insert into the relevant box.

(i).   One mole of electrons means.
(a) 1Newton   (b) 1 cal   (c) 1 joule   (d) 1 Faraday

(ii)   Naphthalene is Purified by _____.
(a) Sublimation   (b) Neutralization   (c) Condensation   (d) All of these

(iii).   1amu = _____.
(a) 1.66×10^{-23}g   (b) 1.661×10^{-24}g   (c) 0.66×10^{-24}g   (d) 0.066×10^{-25}g

(iv).   Number of waves passing through a point per second is called_____.
(a) Frequency (b) Wave length   (c) Wave number   (d) Photon

(v).   Number of unpaired electrons present in He atom is _____.
(a) One   (b) Zero   (c) Two   (d) Three

(vi).   Which one has highest boiling point?
(a) H_2S (b) HCl   (c) NH_3 (d) H_2O

(vii).   Bond angle in unit cell of diamond is _____.
(a) 100^0 (b) 120^0 (c) 109.5^0 (d) 60^0

(viii). Total number of single bonds in methane is _____.
(a) 2   (b) 3   (c) 4   (d) 5

(ix).   The number of components in binary solution is _____.
(a) 5   (b) 4   (c) 3   (d) 2

(x).   Which one is used as reference electrode.
(a) Carbon   (b) SHE   (c) Ga   (d) Ne

(xi).   Common ore of Aluminium is _____.
(a) Iron Oxide (b) Nitride   (c) Bauxite   (d) None of them

(xii).   Highest electron affinity is shown by _____.
(a) Oxygen   (b) Flourine   (c) Hydrogen   (d) All of them

(xiii). The charge of electron was determined by ………
(a) Thomson   (b) Millikan   (c) Crooks   (d) Stony

(xiv).   Which one will diffuse slowly?
(a) Hydrogen   (b) Ammonia   (c) Nitrogen   (d) Sulphurdioxide

(xv).   Formula of Bauxite is _____ .
(a) Al_2O_3 (b) Fe_2O_3 (c) Cr_2O_3 (d) CaO

(xvi).   Which equation shows Charless Law
(a) $V\alpha\frac{1}{T}$ (b) $V\alpha P$ (c) $V\alpha T$ (d) $V\alpha n$

(xvii). Allotropy is shown by _____.
(a) Element   (b) Mixture   (c) Compound (d) All of them

(xviii). Oxidation number of group 1st is _____.
(a) +1   (b) +2   (c) +3   (d)+4

Chemistry Part-I

Time: Allowed: 2.40h   Max. Marks: 67

SECTION "B"

Q2. Attempt any TEN questions. Each question carries equal marks.   (40)

    (i)   Write down the advantages of paper chromatography.

    (ii)   Calculate the total number of atoms present in 36g of $C_6H_{12}O_6$.

    (iii)   Discuss the discovery of protons in an atom.

    (iv)   Why sulphur dioxide has dipole moment 1.62D and carbon dioxide has zero dipole moment.

    (v)   What are the defects present in Rutherford's Model of an Atom?

    (vi)   Write down a note on hydrolysis.

    (vii)   Why is cooking time reduced by a pressure cooker?

    (viii)   In carbon disulfide the bond is polar but why is molecule as a whole non polar?

    (ix)   Explain the First Law of Thermodynamics.

    (x)   Discuss the type of equilibrium with examples.

    (xi)   Explain self Ionization in water.

    (xii)   Write down the guidelines for assigning of oxidation number.

SECTION "C"

Note: Attempt any THREE questions. Each question carries equal marks. (27)

Q3.   (a) Hydrogen Fluoride is more polar than water but boiling point of water is higher Than HF why?

        (b) Calculate the number of molecules of Ammonia in $12dm^3$ volume at 25^0C and 1 atm pressure

Q4.   (a) Discuss the Millikan's oil drop experiment in detail.

        (b) Prove that $qp = \Delta H$.

Q5.   (a) What is catalyst? Explain the kinds of catalysts.

        (b) Discuss the zero order, fractional order and first order reactions.

Q6.   (a) Discuss the properties of Cathode rays.

        (b) Write down the properties of covalent crystals.