

Attempt all Sections.

**Section- A**

(18 Marks)

(12 x 1=12)

**CHEMISTRY**

2019

- Q.1. (a) Choose the correct answers.
- (i) Mendeleev's name, element as Eka-Silicon.  
(a) Tin (b) Lead (c) Germanium (d) Silicon
- (ii) Chille salt Peter is the Ore of  
(a) K (b) Na (c) Li (d) Be
- (iii) The element Arsenic (As) belongs to which group.  
(a) IA (b) IIIA (c) IVA (d) VA
- (iv) The formula of Borax is  
(a)  $H_3BO_3$  (b)  $Na_2B_4O_7 \cdot 10H_2O$  (c)  $B_2O_3$  (d) BN
- (v) Stainless steel is an alloy of  
(a) Cu, Zn (b) Fe, Ni and Cr (c) Cu, Fe (d) Non of these
- (vi) In acetylene  $H-C \equiv C-H$  molecule, there are how many Pi  $\pi$  bonds.  
(a) 3 (b) 2 (c) 4 (d) Zero
- (vii) The general formula of alkyne is.  
(a)  $C_nH_{2n+2}$  (b)  $C_nH_{2n-2}$  (c)  $C_nH_{2n}$  (d) Non of these
- (viii) In substituted Benzen the substituent that withdraws Pi  $\pi$  electron from benzene ring is called  
(a) Para directing group (b) Meta directing group (c) Ortho directing group (d) Non of these
- (ix) Select from the following which one is amide  
(a)  $H_3C-NH_2$  (b)  $H_3C-NH-CH_3$  (c)  $H_3C-\overset{\overset{O}{||}}{C}-NH_2$  (d)  $H_3C-\overset{\overset{O}{||}}{C}-CH_3$
- (x) The atmosphere contains  
(a) 78%  $O_2$ , 21%  $N_2$  (b) 78%  $N_2$ , 21%  $O_2$  (c) 80%  $N_2$ , 20%  $O_2$  (d) 80%  $O_2$ , 20%  $N_2$
- (xi) Phenol is also known as.  
(a) Acetic acid (b) Carboic acid (c) Tartaric acid (d) Trichloro acetic acid
- (xii) Ionization energy across the period  
(a) Decrease (b) Increases. (c) Same (d) Non of these
- (b) **Fill in the blanks.** (6 x 1=6)
- (i) The no of electrons in the outermost shell of halogen elements is.....
- (ii) Bauxite is an ore of.....
- (iii) T.N.T is an abbreviation for.....
- (iv) Paramagnetic property is due to the presence of..... electrons.
- (v) In Benzene C is..... hybridized.
- (vi)  $E_1$  reaction is.....step reaction.

**Section- B**

(39 Marks)

(13 x 3=39)

- Q.2. Attempt any thirteen questions, each carry (03) Marks.
- (a) Write any three resemblances of H with IV A group.
- (b) Define atomic size and discuss its trend in period and group.
- (c) Write any three similarities of IA and IIA group elements.
- (d) Discuss any three uses of  $H_3BO_3$  (Boric acid).
- (e) Write the names and allotropic forms of VI group elements.
- (f) Why transition elements form colour salts.
- (g) Define the following terms. (i) Central metal atom (ii) Lignad (iii) Chelate
- (h) Discuss the types of Coal.
- (i) Define cracking and its two types.
- (j) Define SP hybridization with and example.
- (k) Alkynes are acidic why?
- (l) What are meta directing group write any two examples.
- (m) Define  $SN_1$  and  $SN_2$  reactions.
- (n) How primary, secondary and tertiary alcohols are distinguished.
- (o) Define Hydrogenation give one example.
- (p) What are fertilizers, name any four nitrogenous fertilizers.
- (q) Define air pollution and name primary pollutants.

**Section- C**

(28 Marks)

(7 x 4=28)

- Note: - Attempt any four questions, each carry (07)marks
- Q.3. Discuss the resemblances and differences of H with Halogen group.
- Q.4. Write down the chemical properties of Al-(any seven)
- Q.5. Write in detail the commercial preparation of Na by Down's cell.
- Q.6. How bleaching powder is prepared discuss its chemical properties and uses.
- Q.7. Define isomerism and discuss its types with examples.
- Q.8. Define Lipids and explain its classification.
- Q.9. Draw the structural formula for the following compounds.  
(i) 2,2-dichloropropane (ii) 3-methyl butanal (iii) m-xylene.

