1224 **Warning:- Please write your Roll No. in the space provided and sign. Roll No----------**
(Inter Part – II) **(Session 2020-22 to 2022-24)** **Sig. of Student ----------**
Chemistry (Objective) SGD-1-24 **Group – I** **Paper (II)**
Time Allowed:- 20 minutes **PAPER CODE 4481** **Maximum Marks:- 17**

Note:- You have four choices for each objective type question as A, B, C and D. The choice which you think is correct; fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question. Write **PAPER CODE, which is printed on this question paper,** on the both sides of the Answer Sheet and fill bubbles accordingly, otherwise the student will be responsible for the situation. Use of Ink Remover or white correcting fluid is not allowed.

Q.1

1) Classification of elements in the modern periodic table is based on
(A) Law of Triads (B) Law of octaves (C) Moseley law (D) Mendeleev's periodic law

2) Chile saltpetre has the chemical formula
(A) $NaNO_3$ (B) KNO_3 (C) $CaCO_3$ (D) Na_2CO_3

3) Aluminium oxide is
(A) Acidic Oxide (B) Basic Oxide (C) Amphoteric Oxide (D) Non of these

4) Aqua Regia can dissolve noble metals due to the formation of
(A) Nitrosyl chloride (B) Nascent Nitrogen (C) Nitric oxide (D) Nitrous Acid

5) Which halogen occurs naturally in a positive oxidation state
(A) Flourine (B) Chlorine (C) Bromine (D) Iodine

6) Group VI B of Transition elements contain
(A) Zn, Cd, Hg (B) Fe, Ru, Os (C) Cr, Mo, W (D) Mn, Te, Re

7) Select from the following the one which is alcohol
(A) $CH_3 - CH_2 - OH$ (B) $CH_3 - O - CH_3$ (C) $CH_3 - COOH$ (D) $CH_3 - CH_2 - Br$

8) Preparation of vegetable ghee involves
(A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation

9) Which compound is the most reactive one
(A) Benzene (B) Ethene (C) Ethane (D) Ethyne

10) Nucleophile is usually
(A) Basic in character (B) Acidic in character (C) Basic and positively charged (D) Basic and Negatively charged

11) Which of the following compound is called Universal Solvant?
(A) H_2O (B) CH_3OH (C) C_2H_5OH (D) $CH_3 - O - CH_3$

12) Acetone react with HCN to form cyanohydrin. It is an example of
(A) Electrophillic addition (B) Electrophillic substitution (C) Nucleophillic addition (D) Nucleophillic substitution

13) Which acid is used in manufacture of synthetic fiber
(A) Formic Acid (B) Acetic Acid (C) Oxalic Acid (D) Carbonic Acid

14) Which one of the following element is not present in all proteins.
(A) Carbon (B) Hydrogen (C) Nitrogen (D) Sulpher

15) Micronutrient element are required in Quantity
(A) 4 – 40 gm (B) 6 – 200 gm (C) 6 – 200 kg (D) 4 – 40 kg

16) The pH range of acid rain is
(A) 7 – 6.5 (B) 6.5 – 6 (C) 6 – 5.6 (D) less than 5

17) Which one of the following substance cause acid rain?
(A) SO_2 (B) Hydro carbons (C) Chloroflourocarbons (D) O_3

Warning:- Please, do not write anything on this question paper except your Roll No.

1224 (Inter Part - II) **(Session 2020-22 to 2022-24)**

Chemistry (Subjective) **(Group I)** **Paper (II)**

Time Allowed: 2.40 hours SGD-1-24 **Maximum Marks: 68**

Section ---------- I

2. **Answer briefly any Eight parts from the followings:-** **8 × 2 = 16**

(i) Why 2nd ionization energy is greater than 1st ionization energy?
(ii) Why is diamond non-conductor but graphite is conductor?
(iii) What is general trend for the solubility of sulphates of alkaline earth metals?
(iv) Why lime is added to acidic soil? **(v)** How does $K_2Cr_2O_7$ oxidize the H_2S and $FeSO_4$?
(vi) How zinc coating prevents iron from corrosion?
(vii) How antiknocking agents are prepared from alkyl halides? **(viii)** What is wurtz synthesis?
(ix) What is function of nucleic acid? **(x)** How temperature affects the activity of enzymes?
(xi) How triglycerides are hydrolyzed? **(xii)** What is meant by dry cleaning in paper manufacturing?

3. **Answer briefly any Eight parts from the followings:-** **8 × 2 = 16**

(i) Why N_2O is called laughing gas? **(ii)** Write down any four uses of Nitric acid.
(iii) What are Freons and Teflon? **(iv)** Why HF is weaker acid than HCl? Justify.
(v) Define aromatic compound by giving two examples. **(vi)** How vital theory was rejected?
(vii) Convert methane into methyl alcohol. **(viii)** Write down the industrial preparation of Ethyne.
(ix) Mention the four physical properties of Ethene.
(x) Mention any two conditions which are required for the formation of smog.
(xi) Write short note on chemical oxygen demand. (COD).
(xii) Is detergent are threat to aquatic life? Justify.

4. **Answer briefly any Six parts from the followings:-** **6 × 2 = 12**

(i) Why are liquid silicones preferred over ordinary organic lubricants?
(ii) What is the action of an aqueous solution of borax on litmus?
(iii) How will you convert boric acid into borax and vice versa.
(iv) What is Wurtz-Fittig reaction? **(v)** How bakelite is produced? Give reaction.
(vi) How methanol and ethanol can be differentiated?
(vii) What is Tollen's test? Give reaction. **(viii)** How carboxylic acid is prepared from alkene?
(ix) Differentiate between essential and non-essential amino acids.

Section ---------- II

Note: **Attempt any three questions.** **(8 × 3 = 24)**

5. **(a)** What are the improvements made in the Mendeleev's periodic table?
(b) Describe the role of Gypsum in agriculture and industry. (Any four points of each)

6. **(a)** What happens when bleaching powder reacts with
(i) dil H_2SO_4 (ii) excess of conc. H_2SO_4 (iii) NH_3 (iv) CO_2
(b) What is meant by setting of cement? What are the reactions taking place in first twenty four hours and between one to seven days?

7. **(a)** Discuss sp^2 – hybridization with a suitable example.
(b) How would you prepare following compounds from Grignard reagent?
(i) 1-butanol (ii) 2-butanol (iii) Cyanogen chloride (iv) ethane

8. **(a)** How is ethene prepared by Kolbe's electrolytic method. Give its mechanism also.
(b) Give the reactions of acetone with. (i) HCN (ii) NH_2OH (iii) NH_2NH_2 (iv) $NaHSO_3$

9. **(a)** Describe oxidation reactions of Benzene and alkyl benzene.
(b) Explain the following terms
(i) Absolute alcohol (ii) Methylated spirit (iii) Rectified spirit (iv) Denaturing of alcohols

1232 -- 1224 -- 14000