

Roll No. of Candidate : _____

CHEMISTRY

Intermediate Part-II, Class 12th (1st A 424- II) Paper: II Group - I

Time: 20 Minutes

OBJECTIVE Code: 8483 6UG-1-24 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.

1. The main pollutant of leather tanneries in the waste water is due to salt of
(A) Lead (B) Chromium (VI) (C) Copper (D) Chromium (III)
2. One of the following will have the highest boiling point
(A) methanal (B) ethanal (C) propanal (D) 2-hexanone
3. The normal amount of overhead Ozone is about
(A) 150 DU (B) 250 DU (C) 350 DU (D) 450 DU
4. Ethanol can be converted into ethanoic acid by
(A) Hydrogenation (B) Hydration (C) Oxidation (D) Fermentation
5. Phosphorus helps the growth of
(A) root (B) leaf (C) stem (D) seed
6. When ethanal ($\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$) is made to react with ethyl Magnesium Bromide followed by acid hydrolysis, the product formed is
(A) 1-propanol (B) 2-propanol (C) 1-butanol (D) 2-butanol
7. Which one of the following elements is not present in all proteins?
(A) Sulphur (B) Carbon (C) Hydrogen (D) Nitrogen
8. The anhydride of HClO_4 is
(A) ClO_3 (B) ClO_2 (C) Cl_2O_5 (D) Cl_2O_7
9. Which reagent is used to reduce a Carboxylic group to an alcohol?
(A) H_2/Ni (B) H_2/Pt (C) NaBH_4 (D) LiAlH_4
10. In ring test, the colour of $\text{FeSO}_4 \cdot \text{NO}$ is
(A) Brown (B) Red (C) Green (D) Black
11. The conversion of n-hexane into benzene by heating in the presence of Pt is called
(A) Isomerization (B) Aromatization (C) de-alkylation (D) Re-arrangement
12. The chief ore of aluminium is
(A) Na_3AlF_6 (B) $\text{Al}_2\text{O}_3 \cdot 2\text{H}_2\text{O}$ (C) Al_2O_3 (D) $\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$
13. β - β' -dichloroethyl sulphides are commonly known as
(A) Laughing gas (B) Bio-gas (C) Mustard gas (D) Phosgene gas
14. One of the following is not an alkali metal
(A) Francium (B) Caesium (C) Rubidium (D) Radium
15. The state of hybridization of Carbon atom in Methane is
(A) sp^3 (B) sp^2 (C) sp (D) dsp^2
16. Select the two elements which are present in third period
(A) Li, Be (B) Na, Mg (C) K, Ca (D) Rb, Sr
17. One of the following is a typical transition metal
(A) Sc (B) Y (C) Co (D) Ra

Note: Section I is compulsory. Attempt any THREE (3) questions from Section II.

SECTION – I

GUP-1-24

2. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- Why the ionic radii of negative ions are larger than the size of their parent atoms? Give example.
- Give two defects in Mendeleev's periodic table.
- Why transition elements have variable oxidation states?
- KMnO₄ acts as oxidizing agent? Justify with two examples.
- Write the chemistry of setting of cement in first twenty four hours.
- Alkali metals give ionic hydrides. Give reason.
- Write the formula of (a) Asbestos (b) Halite
- What is the excellent method to prepare Alkyl Iodide?
- What is terpolymer? Give one example.
- What are the monosaccharides? Give one example.
- Compare the compound protein with derived protein.
- How Grignard reagent reacts with "HCHO"?

3. Write short answers to any EIGHT questions.

(2 x 8 = 16)

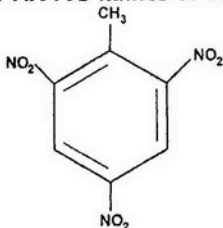
- What is aqua regia? How does it dissolve gold?
- NO₂ is oxidizing agent. Prove it with two suitable examples.
- Arrange the oxidizing power of following with reason: F₂, Cl₂, Br₂, I₂
- Why I₂ is solid while F₂ is gas?
- Define functional group with any two examples.
- Differentiate between metamerism and position isomerism, with suitable examples.
- How oxalic acid is prepared from acetylene?
- Why ethyne is less reactive than ethene?
- Why alkanes are called as paraffins?
- What are leachate?
- Define Biochemical Oxygen demand.
- What is lithosphere?

4. Write short answers to any SIX questions.

(2 x 6 = 12)

- How to prepare borax from colemanite?
- Give two important uses of silicates.
- What is white lead? Give its use.
- Write IUPAC names of the following molecules

a)



b)



(Turn Over)

- v. Ethyl alcohol is a liquid while methyl chloride is a gas, justify it.
- vi. Give the reaction of phenol with:
(a) Zn (b) HNO_3
- vii. How acetaldehyde reacts with the following reagents?
(a) HCN (b) I_2/NaOH
- viii. What is vinegar and give its use?
- ix. Write down the mechanism of reaction between acetic acid and methanol.

SECTION - II

- 5. (a) What is hydration energy? Give one example. Discuss its variation in groups and periods (1+1+2=4) of periodic table. (4)
(b) Write down any eight uses of lime in industry. (4)
- 6. (a) Give the reactions of Bleaching powder with
i. dil H_2SO_4 ii. HCl
iii. NH_3 iv. CO_2 (4)
(b) Describe the process of digestion of paper pulp in Neutral Sulphite chemical process. (4)
- 7. (a) What are organic compounds? Describe the following terms (give one example for each). (4)
i. Alicyclic Compounds
ii. Aromatic Compounds
iii. Heterocyclic Compounds
(b) Write down the chemical reaction of Ethyl Magnesium Bromide with CO_2 , HCHO , Acetone and Epoxide. (4)
- 8. (a) Explain acidic nature of alkyne in detail by giving two examples. (4)
(b) What is aldol condensation? Give its mechanism. (4)
- 9. (a) Discuss catalytic oxidation of Benzene. (4)
(b) How ethers are prepared from following? (4)
i. Williamson's Synthesis ii. Ag_2O

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