

Roll No. of Candidate : _____

CHEMISTRY

Intermediate Part-II , Class 12th (1stA 424- IV) Paper: II Group – II

Time: 20 Minutes

OBJECTIVE Code: 8488 GUG-224 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. Which one of the following compounds is most reactive?
(A) Benzene (B) Ethene (C) Ethane (D) Ethyne
2. Which one of the following is a non-typical transition element?
(A) Cr (B) Mn (C) Zn (D) Fe
3. β - β' -dichloroethyl sulphide is commonly known as
(A) Laughing gas (B) Bio-gas (C) Phosgene gas (D) Mustard gas
4. Which three elements are needed for the healthy growth of plants?
(A) N, S, P (B) N, Ca, P (C) N, P, K (D) N, K, C
5. The reaction between fat and NaOH is called
(A) Esterification (B) Hydrogenolysis (C) Fermentation (D) Saponification
6. Which compound is more soluble in water?
(A) C_2H_5OH (B) C_6H_5OH (C) CH_3COCH_3 (D) n-hexanol
7. Which one of the following ions has maximum value of heat of hydration?
(A) Na^+ (B) Cs^{2+} (C) Ba^{2+} (D) Mg^{2+}
8. Hydrogen bond is the strongest between the molecules of
(A) HF (B) HCl (C) HBr (D) HI
9. Tincal is a mineral of
(A) Al (B) B (C) Si (D) C
10. The amount of Ozone in the atmosphere is expressed in units
(A) KJ (B) KJ/mole (C) DU (D) N
11. The solution of which acid is used for seasoning of food?
(A) Formic acid (B) Acetic acid (C) Benzoic acid (D) Butanoic acid
12. The state of hybridization of Carbon atom in Methane is
(A) sp^3 (B) sp^2 (C) sp (D) dsp^2
13. Peroxyacetyl nitrate (PAN) is an irritant to human beings and it affects
(A) Eyes (B) Ears (C) Stomach (D) Nose
14. Choose the gas which is obtained by the reaction of Ethyl alcohol with conc. H_2SO_4
(A) CO (B) CO_2 (C) C_2H_2 (D) C_2H_4
15. Select the two normal elements present in sixth period
(A) K, Ca (B) Rb, Sr (C) Cs, Ba (D) La, Hf
16. Cannizzaro's reaction is not given by
(A) Formaldehyde (B) Acetaldehyde
(C) Benzaldehyde (D) Trimethylacetaldehyde
17. When water (H – OH) is made to react with Ethyl Magnesium Bromide, the product formed is
(A) $CH_2 = CH_2$ (B) $HC \equiv CH$ (C) $CH_3 - CH_3$ (D) CH_4

CHEMISTRYIntermediate Part-II, Class 12th (1st A 424) Paper: II

Group – II

Time: 2:40 Hours

SUBJECTIVE

G.U.J-2-24

Marks: 68

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

SECTION – I**2. Write short answers to any EIGHT questions.**

(2 x 8 = 16)

- Why diamond is non-conductor and graphite is fairly a good conductor?
- Write the names of families in periodic table.
- Why 'd' and 'f' block elements are called transition elements?
- How KMnO_4 and $\text{K}_2\text{Cr}_2\text{O}_7$ react with H_2S ?
- Write the chemistry of setting of cement in between 1 – 7 days.
- Justify that BeO is amphoteric in nature.
- What will happen when Magnesium reacts with (i) H_2 (ii) N_2
- Starting from primary alkyl halide, prepare ethyl alcohol.
- What is degree of polymerization?
- What are the oligosaccharides? Give one example.
- What do you mean by denaturation of protein?
- How does Grignard reagent react with CO_2 ?

3. Write short answers to any EIGHT questions.

(2 x 8 = 16)

- Write down the structures of N_2O_3 and NO_2 .
- Why the elements of group VI A other than Oxygen show more than two oxidation states?
- Write down any four uses of bleaching powder.
- Define disproportionation reaction with an example.
- Define sp hybridization with an example.
- How wood is converted into coal? Give its equation too.
- What is Wolf-Kishner's reduction? Give reaction.
- How is PCl_3 produced from SOCl_2 ?
- How chloroprene is prepared from acetylene? Give reaction, also.
- How aeration is used for purification of H_2O ?
- What is acid rain? How does it affect on aquatic life?
- How smog is produced? Write down its conditions of formation.

4. Write short answers to any SIX questions.

(2 x 6 = 12)

- What is the action of an aqueous solution of borax on litmus?
- Give any two uses of boric acid.
- How and under what conditions does Aluminium react with the following :
(a) Halogens (b) Alkalies
- What is meant by the terms : (a) Nitration (b) Halogenation
- Why Ethanol has higher boiling point than diethyl ether?

(Turn Over)

- vi. How will you distinguish between methanol and ethanol?
- vii. Give the mechanism of addition of HCN to acetone.
- viii. How to prepare acetic acid from ethyne?
- ix. What are zwitter ions?

SECTION – II

- 5. (a) What are hydrides? Explain types of hydrides with their properties. (4)
- (b) What is the role of lime in agriculture and ceramic industries? (4)
- 6. (a) Write down any eight applications of noble gases in daily life. (4)
- (b) What is significance of potassium fertilizers in plant growth? Explain the manufacturing of KNO_3 on industrial scale. (4)
- 7. (a) Explain any four types of structural isomerism by giving one example of each. (4)
- (b) What are alkyl halides? How are the alkyl halides prepared from alcohol by three different reactions? (4)
- 8. (a) Write a note on photochemical halogenation of methane. (4)
- (b) Describe the Reduction reactions of Carbonyl Compounds with following reagents: (4)
 - i. $\text{NaBH}_4/\text{H}_3\text{O}^+$
 - ii. Ni/H_2(Give two reactions for each)
- 9. (a) What is Kekule's Structure of Benzene? How did he support his theory? (1+3=4)
- (b) How will you prepare phenol from the following? (4)
 - i. Chlorobenzene
 - ii. Sodium salt of Benzene Sulphonic Acid