Roll No. : _____

Objective Paper Code **8482**

Intermediate Part Second - 103

CHEMISTRY (Objective) GROUP - II

Time: 20 Minutes Marks: 17 FBD-9-22

Q.No.1 **You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill the relevant circle in front of that question number on computerized answer sheet. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero marks in that question. Attempt as many questions as given in objective type question paper and leave other circles blank.coa**

S.#	Questions	A	B	C	D
1	Keeping in view the size of atoms, which order is the correct?	Mg > Sr	Ba > Mg	Lu > Ce	$C\ell > I$
2	Which does not belong to alkaline earth metals?	Be	Ra	Ba	Rn
3	Which metal is used in the thermite process because of its activity?	Iron	Copper	Aluminium	Zinc
4	Laughing gas is chemically:	NO	N_2O	NO_2	N_2O_4
5	The anhydride of $HC\ell O_4$ is:	$C\ell O_3$	$C\ell O_2$	$C\ell_2O_5$	$C\ell_2O_7$
6	Coordination number of Pt in $[Pt\ C\ell(NO_2)(NH_3)_4]$ is:	2	4	1	6
7	A double bond consists of:	Two sigma bonds	One sigma and one pi bond	One sigma and two pi bonds	Two pi bonds
8	Vinyl acetylene combines with $HC\ell$ to form:	Poly acetylene	Benzene	Chloroprene	Divinyl acetylene
9	Benzene cannot undergo:	Substitution reaction	Addition reaction	Oxidation reaction	Elimination reaction
10	S_N2 reactions can be best carried out with:	Primary alkyl halides	Secondary alkyl halides	Tertiary alkyl halides	All these
11	Which enzyme is not involved in fermentation of starch?	Diastase	Zymase	Urease	Invertase
12	Cannizzaro's reaction is not given by:	Formaldehyde	Acetaldehyde	Benzaldehyde	Trimethyl acetaldehyde
13	Which reagent is used to reduce a carboxylic group to an alcohol?	H_2/Ni	H_2/Pt	$NaBH_4$	$LiA\ell H_4$
14	A polymeric substance that is formed in the liquid state and then hardened to a rigid solid is called a:	Fiber	Plastic	Varnish	Polyamide resin
15	Phosphorous helps the growth of:	Root	Leave	Stem	Seed
16	Fungicides are the pesticides which:	Control the growth of fungus	Kill insects	Kill plants	Kill herbs
17	In purification of potable water the coagulant used is:	Nickle sulphate	Copper sulphate	Barium sulphate	Alum

Intermediate Part Second Roll No. _____

CHEMISTRY (Subjective) GROUP - II

Time: 02:40 Hours Marks: 68 FBD-G2-22

SECTION – I

2. **Write short answers to any EIGHT parts.** 16
   (i) Why metallic character increases from top to bottom in a group of metals?
   (ii) What are polymeric halides? Give example.
   (iii) How is lime mortar prepared?
   (iv) Why is the aqueous solution of Na_2CO_3 alkaline in nature?
   (v) How will you convert boric acid into borax and vice versa?
   (vi) Why CO_2 is non-polar in nature?
   (vii) What is meant by Fuming nitric acid?
   (viii) NO_2 is a strong oxidizing agent. Prove the truth of this statement giving examples.
   (ix) Why does damaged tin plated iron get rusted quickly?
   (x) What are chelates? Give example.
   (xi) Describe prilling of urea.
   (xii) What do you mean by setting of cement?

3. **Write short answers to any EIGHT parts.** 16
   (i) How $C\ell O_2$ is prepared? Give its reaction.
   (ii) What are freons and teflons? Give their importance.
   (iii) Define homologous series. Also give two examples.
   (iv) Why do ethers and ketones show metamerism? Justify.
   (v) Write structural formula of (a) vinyl bromide (b) 3-n-propyl-1, 4-pentadiene.
   (vi) How will you prepare propene from isopropyl chloride?
   (vii) Identify "A and B" : $CH_3CH_2CH_2OH \xrightarrow{PC\ell_5} A \xrightarrow{Na/Ether} B$
   (viii) Convert methane into methanol.
   (ix) Discuss the reactivity of alkyl halides.
   (x) What is saponification number? Give saponification number of tripalmitate.
   (xi) Explain the classes of enzymes with one example in each (a) isomerase (b) lyases.
   (xii) Discuss the specificity of enzymes.

4. **Write short answers to any SIX parts.** 12
   (i) How is m-chloronitrobenzene prepared from benzene?
   (ii) Define resonance. Give one example.
   (iii) How ethanol reacts with Conc $\cdot H_2SO_4$ at different temperatures?
   (iv) Write note on Lucas test.
   (v) How will you distinguish between butanone and 3-pentanone?
   (vi) Write four uses of acetic acid.
   (vii) Define essential and non-essential amino acids.
   (viii) What are leachates?
   (ix) Define oxidizing and reducing smog.

SECTION – II Attempt any THREE questions. Each question carries 08 marks.

5. (a) What is ionization energy? Give an example. How does it vary in group and periods? 04
   (b) Write eight uses of borax. 04

6. (a) Compare the chemical behaviour of lithium with magnesium. (any four points) 04
   (b) Describe the following properties of transition metals (i) Alloy formation (ii) Paramagnetism. 04

7. (a) Define sp-hybridization. Explain the structure of ethyne on the basis of sp-hybridization. 04
   (b) Explain nucleophilic substitution bimolecular reaction. (S_N2) 04

8. (a) Explain the acidic character of alkynes with two examples. 04
   (b) What is Cannizzaro's reaction? Explain with mechanism. 04

9. (a) Explain the terms with reference to alcohols: (i) Dehydration (ii) Oxidation 04
   (b) Explain the rules for nomenclature of monocyclic aromatic hydrocarbons and their derivatives. (any four) 04