FSD

Intermediate Part Second (New Scheme) Roll No. _____

CHEMISTRY (Subjective) GROUP - I

Time: 02:40 Hours Marks: 68

SECTION – I

2. **Write short answers to any EIGHT parts.** 16
   (i) Why the second value of electron affinity is usually shown with a positive sign?
   (ii) What are amphoteric oxides? Give two examples.
   (iii) Why 2% gypsum is added in grinding during the process of manufacturing of cement?
   (iv) What is the effect of heat on ortho boric acid?
   (v) Write any two points of importance of oxides of lead in paints.
   (vi) Write formulas of (a) Litharge (b) Red lead.
   (vii) Write two points of difference between red and white phosphorus.
   (viii) Write two reactions to show that H_2SO_4 acts as oxidizing agent.
   (ix) How does P_2O_3 react with water in cold and hot state?
   (x) Define macronutrients of fertilizer with suitable examples.
   (xi) What is the role of digestion step in the manufacture of paper?
   (xii) Write conditions which are required for the formation of smog.

3. **Write short answers to any EIGHT parts.** 16
   (i) Write two important uses of organic chemistry in daily life.
   (ii) How does propyne react with (a) $AgNO_3$ / NH_4OH (b) $Cu_2C\ell_2$ / NH_4OH
   (iii) How will you bring about the following conversion? Methane to Ethane
   (iv) Write the structures of (a) Benzene (b) Naphthalene (c) Toluene (d) Biphenyl.
   (v) What is meant by the terms (a) Aromatic (b) Halogenation?
   (vi) Define (a) Nucleophile (b) Electrophile.
   (vii) Write equation showing reaction of ethyl magnesium bromide with water.
   (viii) Write the formulas of (a) 1-Butanol (b) 2-Butanol.
   (ix) Why ethyl alcohol is liquid while methyl chloride is a gas?
   (x) What is the difference between essential and non-essential amino acids?
   (xi) Write the structural formulas of (a) Glycine (b) Alanine.
   (xii) What is glacial acetic acid? Write its formula.

4. **Write short answers to any SIX parts.** 12
   (i) Write balanced chemical reactions of Conc · H_2SO_4 with (a) Sodium bromide (B) Sodium chloride.
   (ii) Give balanced chemical reaction of chlorine with cold dilute sodium hydroxide solution.
   (iii) Which is stronger acid? $HC\ell O_3$ or $HBrO_3$ and why?
   (iv) Define paramagnetism. Which two ions have the strongest paramagnetic behaviour?
   (v) How is formaldehyde prepared in laboratory? Give its chemical reaction with necessary conditions.
   (vi) Give a reaction which is used to protect a carbonyl group against strong alkaline oxidizing agents.
   (vii) Define homopolymer with an example.
   (viii) What is the difference between fats and oils?
   (ix) Give the role of DNA and RNA in life.

SECTION – II

Attempt any THREE questions. Each question carries 08 marks.

5. (a) What are the improvements made in the Mendeleev's Period Table? 04
   (b) Mention the properties of beryllium in which it does not resemble with its own family. 04

6. (a) How steel is manufactured by Bessemer's Process? 04
   (b) What is acid rain? How does it affect our environment? 04

7. (a) How will you prepare ethane by Kolbe's method and from Grignard reagent? 04
   (b) Describe nitration and bromination of benzene with mechanism. 04

8. (a) Starting from ethene, outline the reactions for the preparation of the following compounds. 04
   (i) Ethyl dibromide (ii) Ethyne (iii) Ethane (iv) Ethylene glycol
   (b) How can ethanol be prepared from (i) Molasses (ii) Starch ? 04

9. (a) Write four important points of difference between S_N1 and S_N2 mechanism 04
   (b) Explain with mechanism the addition of sodium bi-sulphite to acetone. Write utility of this reaction. 04

FSD

Roll No. : _____

Objective
Paper Code
8486

Intermediate Part Second (New Scheme)
CHEMISTRY (Objective) GROUP - II
Time: 20 Minutes Marks: 17

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.**

S.#	Questions	A	B	C	D
1	In the purification of potable water the coagulant used is:	Nickle sulphate	Copper sulphate	Barium sulphate	Alum
2	Micro-nutrients are required in quantity ranging from:	4 - 40 g	6 - 200 g	6 - 200 kg	4 - 40 kg
3	Which is a monosaccharide?	Fructose	Sucrose	Starch	Cellulose
4	The reaction between fat and NaOH is called:	Esterification	Hydrogenolysis	Fermentation	Saponification
5	Which is not a fatty acid?	Propanoic acid	Acetic acid	Phthalic acid	Butanoic acid
6	Which of the given compounds will not give iodoform test on treatment with I_2 / NaOH ?	Acetaldehyde	Acetone	Butanone	3-pentanone
7	Which compound will have maximum repulsion with H_2O ?	C_6H_6	C_2H_5OH	$CH_3CH_2CH_2OH$	CH_3-O-CH_3
8	Grignard reagent is reactive due to:	The presence of halogen atom	The presence of Mg atom	The polarity of C-Mg bond	The polarity of Mg-X bond
9	Benzene cannot undergo:	Substitution reactions	Addition reactions	Oxidation reactions	Elimination reactions
10	Vinyl acetylene combines with $HC\ell$ to form:	Polyacetylene	Benzene	Chloroprene	Divinyl acetylene
11	In t-butyl alcohol, the tertiary carbon is bonded to:	Two hydrogen atoms	Three hydrogen atoms	One hydrogen atom	No hydrogen atom
12	Which is a typical transition metal?	Sc	Y	Ra	Co
13	Which halogen occurs naturally in positive oxidation state?	Fluorine	Chlorine	Bromine	Iodine
14	Which species has the maximum number of unpaired electrons?	O_2	O_2^+	O_2^-	O_2^{2-}
15	Which element is not present abundantly in earth's crust?	Silicon	Aluminium	Sodium	Oxygen
16	Which sulphate is not soluble in water?	Sodium sulphate	Potassium sulphate	Zinc sulphate	Barium sulphate
17	Mark the correct statement:	All the lanthanides are present in the same group	All the halogens are present in the same period	All the alkali metals are present in the same group	All the noble gases are present in the same period

FSD

Roll No. : _____

Objective Paper Code **8488**

Intermediate Part Second (New Scheme)

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