

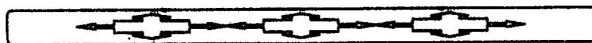


<b>Chemistry</b>	(C)	<b>L.K.No. 1071</b>	Paper Code No. 8485
Paper II	( Objective Type )	<b>Ist - A - Exam - 2023</b>	<b>(Group Ist)</b>
Time :	20 Minutes	<b>Inter ( Part II )</b>	
Marks :	17	Session (2019 - 21) to (2021 - 23)	

Note : Four possible choices A, B, C, D to each question are given. Which choice is correct fill that circle in front of that Question No. Use Marker or Pen to fill the circles. Cutting or filling two or more circles will result in Zero Mark in that Question.

Bwp-12-1-23

Q.No.1 (1)	Tincal is a Mineral of : (A) Al (B) B (C) Si (D) C
(2)	Chile Saltpetre has the Chemical Formula : (A) $\text{NaNO}_3$ (B) $\text{KNO}_3$ (C) $\text{Na}_2\text{B}_4\text{O}_7$ (D) $\text{Na}_2\text{CO}_3 \cdot \text{H}_2\text{O}$
(3)	Mark the Correct Statement : (A) All Lanthanides are present in the same group (B) All Halogens are present in the same period (C) All the Alkali Metals are present in the same group (D) All the noble gases are present in the same period
(4)	Oxidation of NO in air produces : (A) $\text{N}_2\text{O}$ (B) $\text{N}_2\text{O}_3$ (C) $\text{N}_2\text{O}_4$ (D) $\text{N}_2\text{O}_5$
(5)	Linear Shape is associated with which set of Hybrid Orbitals : (A) sp (B) $\text{sp}^2$ (C) $\text{sp}^3$ (D) $\text{dsp}^2$
(6)	The strength of binding energy of transition elements depends upon : (A) Number of Electron pairs (B) Number of Unpaired Electrons (C) Number of Neutrons (D) Number of Protons
(7)	Which Halogen occurs naturally in a positive Oxidation state : (A) Fluorine (B) Chlorine (C) Bromine (D) Iodine
(8)	Preparation of Vegetable Ghee involves : (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
(9)	Methyl Alcohol is not used : (A) As a Solvent (B) As an Anti - freezing Agent (C) As a substitute for Petrol (D) For Denaturing of Ethyl Alcohol
(10)	Elimination Bimolecular reactions involve : (A) First Order Kinetics (B) Second Order Kinetics (C) Third Order Kinetics (D) Zero Order Kinetics
(11)	The Electrophile in Aromatic Sulphonation is : (A) $\text{H}_2\text{SO}_4$ (B) $\text{HSO}_4^-$ (C) $\text{SO}_3$ (D) $\text{SO}_3^+$
(12)	The other name of Phenol is : (A) Carbonic Acid (B) Carbolic Acid (C) Carboxylic Acid (D) Adipic Acid
(13)	Select the Monomers of Nylon - 6, 6 : (A) Adipic Acid and Ethylene Glycol (B) Acetic Acid and Hexamethylene Diamine (C) Adipic Acid and Hexamethylene Diamine (D) Acetic Acid and Ethylene Glycol
(14)	Ozone Layer is present in which region of Atmosphere : (A) Troposphere (B) Stratosphere (C) Thermosphere (D) Ionosphere
(15)	Which One will not give Silver Mirror Test : (A) Formaldehyde (B) Acetaldehyde (C) Acetone (D) Propionaldehyde
(16)	Ammonia contains how much percentage of Nitrogen : (A) 50 % (B) 82 % (C) 46 % (D) 100 %
(17)	The number of Peptide Bonds in a Dipeptide is : (A) 1 (B) 2 (C) 3 (D) 4





Roll No.	1071 - 18000	Inter ( Part II )	Session (2019 - 21) to (2021 - 23)
Chemistry (Subjective )	Ist - A - Exam 2023	Group Ist	Time 2 : 40 Hours Marks : 68

Note: It is compulsory to attempt any (8 - 8) Parts each from Q.No. 2 , Q.No.3 and attempt any (6) Parts from Q.No.4. Attempt any (3) Questions from Part - II .Write same Question No. and its Part No. as given in the Question Paper.

Make Diagram where necessary.

Part - I

BWP-12-1-23

22 x 2 = 44

Q.No.2	(i)	Write any two points in which Boron is different from its family members.
	(ii)	Why is increase in Atomic Size not regular in case of Group III - A elements ?
	(iii)	What are Silicones ? Give their any two properties.
	(iv)	What are Fused Membered Polycyclic Compounds ? Draw structure of two compounds.
	(v)	What do you mean by Side Chain Oxidation of Toluene ?
	(vi)	How did Kekule support his theory about structure of Benzene ? Give any two points.
	(vii)	What are Thermoplastic Polymers ? Give one example.
	(viii)	What are Polysaccharides ? Give two examples.
	(ix)	What is Saponification Number ? Give one example.
	(x)	Which human activities are responsible for the release of Hydrocarbons in air ?
	(xi)	How do the Detergents cause the Water Pollution?
	(xii)	How is Acid Rain harmful for Aquatic Animals?
Q.No.3	(i)	What is meant by Hybridization ?
	(ii)	Write down the structures of Isomers having Molecular Formula $C_4H_{10}$ .
	(iii)	How is Ethyne Polymerized to Neoprene ?
	(iv)	How can you differentiate between Saturated and Unsaturated Hydrocarbons?
	(v)	How is Ethane produced from Ethyl Magnesium Bromide ?
	(vi)	Why is $SO_3$ dissolved in $H_2SO_4$ and not in water ?
	(vii)	Write down the reaction of Cu with : (a) dil. $HNO_3$ (b) Conc. $HNO_3$
	(viii)	How is $H_3PO_3$ produced from $PCl_5$ ?
	(ix)	Write any two methods for the preparation of Alkyl Halides from Alcohol.
	(x)	Write down the reaction of Ammonia with Ethyl Bromide .
	(xi)	What are Essential Qualities for a Good Fertilizer ? (Any Four)
	(xii)	Write down any four Non - Woody Raw Materials for Paper Manufacturing.
Q.No.4	(i)	Define Paramagnetism and Diamagnetism.
	(ii)	What will happen when $KMnO_4$ reacts with : (a) Oxalic Acid (b) KOH
	(iii)	What are the Substitutional Alloys ?
	(iv)	How can we distinguish between Ethanol and Methanol ?
	(v)	What will happen when Diethyl Ether react with HI ?
	(vi)	Write structural formula of Glycol and Glycerol.
	(vii)	What product would you obtain when Acetaldehyde reacts with 2,4 - DNPH ?
	(viii)	Write the Silver Mirror Test .
	(ix)	Write down reaction of Acetic Acid with : (a) Thionyl Chloride (b) $PCl_5$

Part - II

3 x 8 = 24

Q.No.5	(a)	Explain the position of Hydrogen in I - A and VII - A Groups.	(4)
	(b)	What is the role of Gypsum in Agriculture ?	(4)
Q.No.6	(a)	Discuss the Beckmann's Method for the preparation of Bleaching Powder.	(4)
	(b)	Write down the Bleaching Step involved in the manufacturing of Paper Process.	(4)
Q.No.7	(a)	Why there is no free rotation around a double bond and a free rotation around a single bond ? Discuss Cis - trans Isomerism.	(4)
	(b)	What happens when : (a) Benzene is heated with Conc. $H_2SO_4$ at $250^\circ C$ .	(4)
		(b) Chlorine is passed through Benzene in Sunlight.	
		(c) A mixture of Benzene vapours and air are passed over heated Vanadium Pentoxide.	
(d) Benzene is burnt in free supply of Air .			
Q.No.8	(a)	How will you Synthesize the following compounds starting from Ethyne : (a) Benzene (b) Ethane (c) Oxalic Acid (d) Methyl Cyanide	(4)
	(b)	Discuss $S_N1$ reactions in detail.	(4)
Q.No.9	(a)	How Carbonyl Compounds are reduced by $NaBH_4$ ? Give the Mechanism also.	(4)
	(b)	How will you prepare Carboxylic Acids from : (i) Hydrolysis of Esters (ii) Oxidative Cleavage of Alkenes (iii) Alkane Nitrile (iv) Alcohols	(4)



Chemistry	(B)	L.K.No. 1072	Paper Code No. 8484
Paper II	( Objective Type )	Ist - A - Exam - 2023	( Group 2 <sup>nd</sup> )
Time :	20 Minutes	Inter ( Part II )	
Marks :	17	Session ( 2019 - 21 ) to ( 2021 - 23 )	

Note : Four possible choices A, B, C, D to each question are given. Which choice is correct fill that circle in front of that Question No. Use Marker or Pen to fill the circles. Cutting or filling two or more circles will result in Zero Mark in that Question.

Bwp-12-2-23

Q.No.1	Ethanol can be converted into Ethanoic Acid by :
(1)	(A) Hydrogenation (B) Hydration (C) Oxidation (D) Fermentation
(2)	Which One is most Toxic : (A) CO <sub>2</sub> (B) CO (C) O <sub>2</sub> (D) CH <sub>4</sub>
(3)	Which Woody Raw Material is used for the manufacture of Paper Pulp : (A) Eucalyptus (B) Bagasse (C) Wheat Straw (D) Bamboo
(4)	Which of these Polymers is a Condensation Polymer : (A) nylon - 6, 6 (B) Polystyrene (C) Polyethene (D) Polyvinylchloride
(5)	Acetic Acid contains : (A) A Hydroxyl Group (B) A Carboxyl Group (C) A Hydroxyl and Carboxyl Group (D) A Carboxyl and an Aldehydic Group
(6)	The Carbon Atom of a Formaldehyde is : (A) sp - Hybridized (B) sp <sup>2</sup> - Hybridized (C) sp <sup>3</sup> - Hybridized (D) dsp <sup>2</sup> - Hybridized
(7)	Which Enzyme is not involved in fermentation of Starch : (A) Diastase (B) Zymase (C) Urease (D) Maltose
(8)	Grignard Reagent is reactive due to : (A) The presence of Halogen Atom (B) The presence of Mg atom (C) The polarity of C - Mg bond (D) None of these
(9)	The conversion of n - hexane into Benzene by heating in the presence of Pt is called : (A) Isomerization (B) Aromatization (C) Dealkylation (D) Rearrangement
(10)	Preparation of Vegetable Ghee Involves : (A) Halogenation (B) Hydrogenation (C) Hydroxylation (D) Dehydrogenation
(11)	The Linear Shape is associated with which set of Hybrid Orbitals : (A) sp (B) sp <sup>2</sup> (C) sp <sup>3</sup> (D) dsp <sup>2</sup>
(12)	f - block elements are also called : (A) Non Typical Transition Elements (B) Outer Transition Elements (C) Normal Transition Elements (D) Inner Transition Elements
(13)	Hydrogen Bond is the strongest between the Molecules of : (A) HF (B) HCl (C) HBr (D) HI
(14)	Oxidation of NO in air produces : (A) N <sub>2</sub> O (B) N <sub>2</sub> O <sub>3</sub> (C) N <sub>2</sub> O <sub>4</sub> (D) N <sub>2</sub> O <sub>5</sub>
(15)	Which of the following elements is not present abundantly in Earth's Crust : (A) Silicon (B) Aluminium (C) Sodium (D) Oxygen
(16)	The number of Elements classified by Newlands in the Periodic Table are : (A) 38 (B) 62 (C) 92 (D) 85
(17)	Oxides of Beryllium are : (A) Acidic (B) Basic (C) Amphoteric (D) Neutral



Roll No.	1072 - 16000	Inter ( Part II )	Session (2019 - 21) to (2021 - 23)
Chemistry ( Subjective )	1st - A - Exam 2023	Group 2nd	Time 2 : 40 Hours Marks : 68

Note: It is compulsory to attempt any (8 - 8) Parts each from Q.No. 2, Q.No.3 and attempt any (6) Parts from Q.No.4. Attempt any (3) Questions from Part - II .Write same Question No. and its Part No. as given in the Question Paper.

Make Diagram where necessary.

Part - I

BWP-12-2-23

22 x 2 = 44

Q.No.2	(i)	How will you convert Boric Acid Into Borax and Vice Versa ?	
	(ii)	Why is CO <sub>2</sub> a gas at room temperature while SiO <sub>2</sub> is a Solid ?	
	(iii)	What are Semiconductors ? Give two examples.	
	(iv)	Write two Electrophilic Substitution Reactions of Benzene.	
	(v)	Prepare Benzene from Acetylene.	
	(vi)	Draw the resonance structures of Benzene.	
	(vii)	Differentiate between Thermoplastic and Thermosetting Polymers.	
	(viii)	Write structures of Monomers of Epoxy Resins.	
	(ix)	How are Proteins classified based on their functions ?	
	(x)	Describe Hazards of Ozone as a Pollutant.	
	(xi)	What do you mean by Biochemical Oxygen Demand (BOD) ?	
	(xii)	Write the two harmful effects of Chlorination of Water.	
Q.No.3	(i)	Write down names and formulas of any two Ores of Sulphur.	
	(ii)	How is H <sub>2</sub> SO <sub>4</sub> used to Dehydrate the Oxalic Acid and Glucose ?	
	(iii)	How does Aqua Regia dissolve gold in it ?	
	(iv)	What is Reforming ? Give its chemical equation.	
	(v)	What are Alicyclic Compounds ? Draw structure of two compounds.	
	(vi)	What is Markownikov's Rule ? Give one example.	
	(vii)	Why are Alkenes more reactive than Alkanes ?	
	(viii)	How will you prepare Chloroprene from Ethyne ?	
	(ix)	Give two methods for preparation of Alkylhalides from Alcohol .	
	(x)	What are S <sub>N</sub> 2 Reactions ? Give one example.	
	(xi)	How is Diammonium Phosphate prepared ?	
	(xii)	Write down names of any four Non - Woody Raw Materials for Paper.	
Q.No.4	(i)	Under what conditions does Aluminium Corrode ?	
	(ii)	What is meant by Chelates ?	
	(iii)	Why are Transition Metals tough ?	
	(iv)	How can we distinguish Ethanol and Methanol ?	
	(v)	What is meant by Denaturing of Alcohol ?	
	(vi)	How is Phenyl Acetate produced from Phenol ?	
	(vii)	Write down any four uses of Acetaldehyde .	
	(viii)	How can you distinguish Carbonyl Compounds from Non - Carbonyl Compounds ?	
	(ix)	What is Zwitter Ion ?	

Part - II

3 x 8 = 24

Q.No.5	(a)	What are the Halides ? Write its types. Describe one of them in detail.	(4)
	(b)	What will happen when : (i) Lime is heated with coke (ii) Calcium Nitrate is heated (iii) Gypsum is heated (iv) Beryllium Oxide is treated with NaOH	(4)
Q.No.6	(a)	Explain Peculiar Behaviour of Fluorine.	(4)
	(b)	What is Role of Digestion Step in the manufacture of Paper Pulp ?	(4)
Q.No.7	(a)	Define sp <sup>3</sup> Hybridization. Explain formation of Ethane Molecule according to this approach.	(4)
	(b)	Describe the structure of Benzene on the basis of Atomic Orbital Treatment.	(4)
Q.No.8	(a)	Write down the mechanism of Kolbe's Electrolytic Method for the preparation of Ethane.	(4)
	(b)	Discuss S <sub>N</sub> 1 reactions in detail.	(4)
Q.No.9	(a)	What is Haloform Reaction ? How will you prepare Iodoform from : (a) Acetaldehyde (b) Acetone (c) Ethanol	(4)
	(b)	Write Mechanism for the formation of Ethyl Acetate from Ethyl Alcohol and	(4)