

Paper Code Number: 4484		2024 (1 st -A) INTERMEDIATE PART-II (12 th Class)		Roll No:	
CHEMISTRY PAPER-II		GROUP-II		MTN-2-24	
TIME ALLOWED: 20 Minutes		OBJECTIVE		MAXIMUM 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 that bubble in front of that question number, on bubble sheet. Use marker or pen to fill the bubbles. Cutting or filling two or more bubbles will result in zero mark in that question.				
S.#	QUESTIONS	A	B	C	D
1	The fibre which is made from acrylonitrile as monomer:	PVC	Rayon fibre	Acrylic fibre	Polyester fibre
2	For which crop, ammonium nitrate fertilizer is not used?	Cotton	Wheat	Sugar cane	Paddy rice
3	Which of following is better to disinfect water?	Cl ₂	O ₂	O ₃	KMnO ₄
4	The main pollutant of leather tanneries in the waste water is due to the salt of:	Lead	Chromium(VI)	Copper	Chromium(III)
5	Zn, Cd, Hg in Mendeleev's periodic table, were placed with:	Noble metals	Alkaline earth metals	Inner transition metals	Coinage metals
6	Down's cell is used to prepare:	Sodium carbonate	Sodium hydroxide	Sodium bicarbonate	Sodium metal
7	Boric acid cannot be used:	As antiseptic in medicine	For washing eyes	In soda bottles	For enamels and glazes
8	An element that has a high ionization energy and tends to be chemically inactive would most likely to be:	A noble gas	A transition element	An alkali metal	A halogen
9	Formic acid on reaction with dehydrating agent give:	CO ₂ , CO, H ₂ O	CO, OH ⁻	CO, H ₂ O	CO and CO ₂
10	The strength of binding energy of transition elements depends upon:	Number of electron pairs	Number of unpaired electrons	Number of neutrons	Number of protons
11	The state of hybridization of carbon atom in alkane is:	sp ³	sp ²	sp	dsp ²
12	H ₂ C = CH - C ≡ CH and conc HCl on reaction give:	Polyacetylene	Benzene	Chloroprene	Divinyl acetylene
13	Amongst the following, the compound that can be most readily sulphonated is:	Toluene	Benzene	Nitrobenzene	Chlorobenzene
14	Which one is more reactive alkyl halide?	R - F	R - Cl	R - Br	R - I
15	Methyl alcohol is not used:	As a solvent	As a substitute for petrol	As an anti-freezing agent	For denaturing of ethyl alcohol
16	Acetone reacts with HCN to form a cyanohydrin, it is an example of:	Electrophilic addition	Electrophilic substitution	Nucleophilic addition	Nucleophilic substitution
17	Which acid is used in the manufacturing of synthetic fibre?	Formic acid	Oxalic acid	Carbonic acid	Acetic acid

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INTERMEDIATE PART-II (12 th Class)		2024 (1 st -A)	Roll No:
CHEMISTRY PAPER-II GROUP-II		MTN-2-24	
TIME ALLOWED: 2.40 Hours	SUBJECTIVE		MAXIMUM MARKS: 68
NOTE: Write same question number and its parts number on answer book, as given in the question paper.			
SECTION-I			
2. Attempt any eight parts.			8 × 2 = 16
(i)	Why are the ionic radii of negative ions larger than the size of their parent atoms? Give example.		
(ii)	Why does the oxidation state of noble gases usually zero?		
(iii)	Give reactions of lithium with oxygen and carbon dioxide.		
(iv)	What are the products formed when magnesium reacts with nitrogen and sulphur?		
(v)	Why does damaged tin plated iron get rusted quickly?		
(vi)	How does the process of galvanizing protect from rusting?		
(vii)	Give reaction of ethyl magnesium bromide with formaldehyde followed by acid hydrolysis.		
(viii)	Give reaction for the preparation of ethyl alcohol from ethyl bromide. Also mention reaction conditions.		
(ix)	Define lipids. Give difference between fats and oils.		
(x)	Briefly describe the term "Specificity" of enzyme.		
(xi)	What is the difference between simple lipids and compound lipids?		
(xii)	Why are nitrogenous fertilizers supplied to the plants or soil?		
3. Attempt any eight parts.			8 × 2 = 16
(i)	NO_2 is strong oxidizing agent. Prove the truth of this statement giving two examples.		
(ii)	Complete and balance the given equations: (i) $\text{P} + \text{NO} \rightarrow ?$ (ii) $\text{HNO}_2 + \text{CO}(\text{NH}_3)_2 \rightarrow ?$		
(iii)	Why HF is weaker acid than HCl ?		
(iv)	How does iodine pentoxide (I_2O_5) react with H_2O and CO ?		
(v)	What is Catenation?		
(vi)	What is Catalytic cracking?		
(vii)	Write down structural formulas of 1, 3 – Butadiene and 2 – methyl – 2 – butene.		
(viii)	Differentiate between clemmensen and wolf-Kishner reduction giving chemical reactions.		
(ix)	How would you prepare trans alkene from alkyne?		
(x)	What is ecosystem?		
(xi)	How do oxides of sulphur adversely affect the environment?		
(xii)	How is value of COD determined?		
4. Attempt any six parts.			6 × 2 = 12
(i)	What are Silicones? How are they prepared?		
(ii)	What is Borax? Give its commercial preparation.		
(iii)	What is importance of oxides of Lead in Paints?		
(iv)	What were objections to Kekule's formula for Benzene?		
(v)	Ethyl alcohol is a liquid while methyl chloride is a gas. Why?		
(vi)	Water has higher boiling point than Ethanol. Justify.		
(vii)	How will you distinguish between Methanal and Ethanal?		
(viii)	What happens when Sodium formate is heated with Soda lime?		
(ix)	What are Essential and Non-essential Amino-Acids?		
SECTION-II			
NOTE: Attempt any three questions.			3 × 8 = 24
5.(a)	Discuss the improvements made in the Mendeleev's Periodic Table and also discuss defects in the Mendeleev's Periodic Table.		4
(b)	Explain commercial preparation of Sodium metal by Down's cell and also give advantages of Down's cell.		4
6.(a)	How bleaching powder is prepared by Hasenclever's method?		4
(b)	What is paper? Describe the process of digestion in paper industry.		1+3=4
7.(a)	Define with example: (i) Tautomerism (ii) Metamerism (iii) Position isomerism (iv) Functional group isomerism		1+1+1+1=4
(b)	What do you understand by the term Nucleophilic substitution? Explain $\text{S}_{\text{N}}2$ mechanism in detail.		1+3=4
8.(a)	Define Markownikov's rule. Predict the structures of the alcohol obtained by the addition of the acid to the given compounds: (i) Propene (ii) 1-Butene (iii) 2-Butene		4
(b)	How does acetaldehyde react with (i) NaHSO_3 (ii) Conc. NaOH (iii) HCN (iv) NH_2OH		4
9.(a)	Define aromatic nitration along with example and its mechanism.		1+1+2=4
(b)	How ethanol is prepared from molasses and starch?		2+2=4