

Maximum Marks: 40
Time allowed: One and a half hours

Answers to this Paper must be written on the paper provided separately.

You will not be allowed to write during the first 10 minutes.

This time is to be spent in reading the question paper.

The time given at the head of this Paper is the time allowed for writing the answers.

Attempt all questions from Section I and any three questions from Section II.

The intended marks for questions or parts of questions are given in brackets [].

Section I

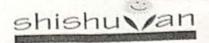
Attempt all questions from this section

Question 1

Choose the correct answers to the questions from the given options (Do not copy the question, Write the correct answer only)

[10]

- (i) The other name for sulphuric acid is
 - (a) Muriatic acid
 - (b) Aqua fortis
 - (e) Oil of vitriol
 - (d) Oil of sulphur
- (ii) Substitution reaction is a characteristic property of
 - (a) Alkanes
 - (b) Alkenes
 - (c) Alkynes
 - (d) Both b and c
- (iii) This gas gives a white precipitate with silver nitrate solution
 - (a) Sulphur dioxide
 - (b) Ammonia
 - (c) Hydrogen chloride
 - (d) Hydrogen sulphide
- (iv) One of the following is an ore of iron
 - (a) Cryolite
 - (b) Bauxite
 - (c) Haematite
 - (d) Calamine



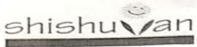
- (v) A nitrate that gives only oxygen on heating
 - (a) Lead nitrate
 - (b) Potassium nitrate
 - (c) Zinc nitrate
 - (d) Magnesium nitrate
- (vi) An organic compound which has a general formula as C_nH2_{n+1}X where X is a halogen is called as
 - (a) Alcohol
 - (b) Aldehyde
 - (c) Alkyl halide
 - (d) Halogen
- (vii) Hydrogen chloride which is highly soluble in water is dried by
 - (a) Anhydrous calcium hydroxide
 - (b) Phosphorous pentaoxide
 - (c) Quick lime
 - (d) Concentrated sulphuric acid
- (ix) The IUPAC name of the compound with the formula CH3CH2CHO is
 - (a) Propanal
 - (b) Propanol
 - (c) Ethanol
 - (d) Ethanal
- (x) When ammonia reacts with excess chlorine the following is one of the final product formed
 - (a) Ammonium chloride
 - (b) Nitrogen gas
 - (c) Nitrogen trichloride
 - (d) Nitrogen dioxide gas



Section II (46 Marks) Attempt any four questions from this section

Question 2

(i)	Define:	[2]	
(1)	(a) Homologous series		
	(b) Catenation		
		101	
(ii)	Name the gas formed when	[2]	
	(a) Sodium sulphide reacts with hydrochloric acid		
	(b) Excess of ammonia reacts with chlorine		
(iii)	Draw the structural diagram of	[3]	
1	(a) 2-Butanol		
	(b) 3-Chloro-2-methyl pentane		
	(e) Ethanoic acid		
(iv)	Complete and balance the following equations	[3]	
	(a) NH ₄ OH + FeSO ₄ →		
	(b) ZnO + HCl →		
	_(c) Mn + 1 % dil HNO ₃ →		
Quest	tion 3		
(i)	Identify the ion/gas present in the following compounds	[2]	
	(a) Compound A when treated with concentrated HCl releases a greenist	1	
	yellow gas which bleaches moist litmus papers.		
	(b) A solution of compound B is treated with lead nitrate and a white		
	precipitate is formed which does not dissolve on heating.		
(ii)	State the following:		
	(a) The process used for concentration of Bauxite	[2]	
	(b) Industrial process of preparation of oil of vitriol		
(iii)	State the observation for the following:		
	(a) Ammonium chloride is treated with an alkali	[3]	
	(b) Concentrated sulphuric acid is added to carbon		
	(c) Lead nitrate is heated		
(iv)	Write the balanced chemical equations for the following:		
ATT S	(a) Preparation of nitric acid from chile salt petre	[3]	
	(b) Preparation of ammonium chloride from ammonia		
	(c) Formation of ethane from ethene		



uestion 4	nassan for the following:	
	reason for the following: and pressure have to be maintained	ed at a particular level
in the prepara	ation of ammonia by Haber's proc	cess.
(b) Sulphur triox	ide is not added to water directly	to form sulphuric
acid.		
ii) Name the following	ig:	
(a) A ore of Zine		
(b) An alloy use	d to build aeroplanes	
iii) Identify the terms	for the following:	
	e where oxidation takes place	
	t used to dissolve HCl gas in water	er
(c) Method used	d to collect ammonia gas	
iv) Complete the tabl	e given below:	
Name the process	Compounds/elements used	Product formed
(a)		Ammonia
	Cryolite, fluorspar, alumina	Aluminium,
(b)	Cryonic, morspur, armini	
estion 5) Write the balanced cl		carbondioxide n of ammonia with
estion 5	nemical equations to show reaction	
estion 5) Write the balanced cl excess of chlorine		n of ammonia with
estion 5) Write the balanced cl excess of chlorine i) Select the correct a statements:	nemical equations to show reaction	n of ammonia with
estion 5) Write the balanced cle excess of chlorine ii) Select the correct a statements: (a) The salt that	nemical equations to show reaction nswer from the brackets to com will dissolve completely in excess	n of ammonia with plete the following s of ammonium
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estion 5) Write the balanced cle excess of chlorine ii) Select the correct a statements: (a) The salt that hydroxide is (b) The gas that parts that the statements is (considered in the salt that t	nemical equations to show reaction nswer from the brackets to com will dissolve completely in excess [ferric sulpha	n of ammonia with plete the following s of ammonium te/copper sulphate]
estion 5) Write the balanced cle excess of chlorine i) Select the correct a statements: (a) The salt that hydroxide is (b) The gas that give the following the followi	nemical equations to show reaction nswer from the brackets to com will dissolve completely in excess [ferric sulpha gives a greenish yellow colour to a trogen/ammonia] g organic compounds:	n of ammonia with plete the following s of ammonium te/copper sulphate]
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estion 5) Write the balanced cle excess of chlorine ii) Select the correct a statements: (a) The salt that hydroxide is (b) The gas that properties (a) The third ment (b) A compound is a solvent for	nemical equations to show reaction nswer from the brackets to com will dissolve completely in excess [ferric sulpha gives a greenish yellow colour to a trogen/ammonia] g organic compounds: mber of the aldehyde series which is formed by chlorination or all organic compounds.	n of ammonia with plete the following s of ammonium te/copper sulphate] a flame is
estion 5) Write the balanced cle excess of chlorine i) Select the correct a statements: (a) The salt that hydroxide is (b) The gas that [ni] Name the following (a) The third men (b) A compound is a solvent for (c) A compound	nemical equations to show reaction nswer from the brackets to come will dissolve completely in excess [ferric sulpha gives a greenish yellow colour to a trogen/ammonia] g organic compounds: mber of the aldehyde series which is formed by chlorination or all organic compounds. with 4 carbon atoms, with a doub	n of ammonia with plete the following s of ammonium te/copper sulphate] a flame is
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- (b) There is a yellow tinge in the final solution formed after the reaction. How is it removed?
- (c) What will happen if the reaction temperature goes beyond 200 degrees?

Question 6

- (i) Distinguish between the following
 (a) Copper oxide and manganese dioxide (using HCI)

 [2]
 - (b) Carbonate ion and sulphite ion (using K₂Cr₂O₇ solution)
- (ii) Give one word for the following statements:

 (a) Property of a compound by which we had a few points and the statements:

 [2]
 - (a) Property of a compound by which water is completely removed from another compound when reacted with it
 - (b) Isomers in which the double bond is shifted between carbon atoms in the same molecule
- (iii) Give three uses of ammonia,

(iv) Study and complete the following table:

Homologous series	Alcohol	
General formula	Aiconol	Aldehyde
IUPAC nome	1.	$C_nH_{2n}O$
compound of the	201	3
		3,
Common name		
	Methyl alcohol	Formaldehyde

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[3]