





Q33.	Acids are those substances which yield $H^+$ ions in aqueous solution and bases are those substances which provides $OH^-$ in aqueous solution, according to  <input type="radio"/> Lewis concept <input type="radio"/> Arrhenius concept <input type="radio"/> Bronsted &Lowry concept <input type="radio"/> Lux-flood concept	Q41.	A substance which act as both as an acid as well as a base is called  <input type="radio"/> amphoteric substance <input type="radio"/> conjugate acid -base pairs <input type="radio"/> buffer <input type="radio"/> salt
Q34.	Which one amongst the followings are acid  <input type="radio"/> HCl <input type="radio"/> NaOH <input type="radio"/> KCl <input type="radio"/> $NH_3$	Q42.	Which one from the following is an example of amphoteric substance  <input type="radio"/> $H_2O$ <input type="radio"/> HCl <input type="radio"/> NaOH <input type="radio"/> $NH_3$
Q35.	An acid is a proton donor & a base is a proton acceptor according to  <input type="radio"/> Lewis concept <input type="radio"/> Arrhenius concept <input type="radio"/> Bronsted &Lowry concept <input type="radio"/> Lux-flood concept	Q43.	An acid is pair of electrons acceptor and a base is a pair of electrons donor proposed by  <input type="radio"/> Lux-flood concept <input type="radio"/> Arrhenius concept <input type="radio"/> Bronsted &Lowry concept <input type="radio"/> Lewis concept
Q36.	A conjugate acid & base pairs is differed by a _____.  <input type="radio"/> $H^+$ <input type="radio"/> $OH^-$ <input type="radio"/> $H^-$ <input type="radio"/> $O^{2-}$	Q44.	Choose the Lewis acids from the following  <input type="radio"/> $Cu^{2+}$ , $CO_2$ <input type="radio"/> $OH^-$ , $Cl^-$ <input type="radio"/> HCl, $HNO_3$ <input type="radio"/> NaCl, $NH_4OH$
Q37.	The conjugate acid and base of $H_2O$ molecule is ___&___ respectively.  <input type="radio"/> $H^+$ & $OH^-$ <input type="radio"/> $H_3O^+$ & $OH^-$ <input type="radio"/> $OH^-$ & $H_3O^+$ <input type="radio"/> $OH^-$ & $H^+$	Q45.	Choose the Lewis acids from the following  <input type="radio"/> NaOH, $NH_4OH$ <input type="radio"/> $Cu^{2+}$ , $CO_2$ <input type="radio"/> HCl, $HNO_3$ <input type="radio"/> $Cl^-$ , $NH_3$
Q38.	Write the conjugate base of $HCO_3^-$ .  <input type="radio"/> $H_2CO_3$ <input type="radio"/> $H^+$ <input type="radio"/> $CO_3^{2-}$ . <input type="radio"/> $OH^-$	Q46.	Neutralisation reaction is  <input type="radio"/> between strong acid & weak base <input type="radio"/> between weak acid & strong base <input type="radio"/> between strong acid &strong base <input type="radio"/> between weak acid & weak base
Q39.	Write the conjugate acid of $NH_3$ .  <input type="radio"/> $NH_4OH$ <input type="radio"/> $H^+$ <input type="radio"/> $NH_2^-$ <input type="radio"/> $NH_4^+$	Q47.	What is the colour of phenolphthalein in basic medium?  <input type="radio"/> orange <input type="radio"/> colourless <input type="radio"/> pink <input type="radio"/> red
Q40.	Choose the correct statement from the following i.A strong acid has a weak conjugate base ii.A weak acid has a strong conjugate base  <input type="radio"/> only (i) is correct <input type="radio"/> only (ii) is correct <input type="radio"/> both (i) & (ii) are incorrect <input type="radio"/> both (i) & (ii) are correct	Q48.	Choose the correct statement from the following i.A strong base has a weak conjugate acid ii.A weak base has a strong conjugate acid  <input type="radio"/> only (i) is correct <input type="radio"/> only (ii) is correct <input type="radio"/> both (i) & (ii) are incorrect <input type="radio"/> both (i) & (ii) are correct

Q49.	Which one is an example of double salt? <input type="radio"/> A $K_2SO_4 \cdot Al_2(SO_4)_3 \cdot 24H_2O$ <input type="radio"/> B $NaHCO_3$ <input type="radio"/> C $Mg(OH)Cl$ <input type="radio"/> D $K_4[Fe(CN)_6]$	Q59.	Calculate the equivalent mass of $Al(OH)_3$ . <input type="radio"/> A 78 <input type="radio"/> B 38 <input type="radio"/> C 26 <input type="radio"/> D 36
Q50.	Which one of the following is an acidic salt? <input type="radio"/> A $Zn(OH)Cl$ <input type="radio"/> B $K_2SO_4$ <input type="radio"/> C $NaHSO_4$ <input type="radio"/> D $CaOCl_2$	Q60.	Calculate the equivalent mass of $Na_2CO_3$ . <input type="radio"/> A 53 <input type="radio"/> B 52 <input type="radio"/> C 106 <input type="radio"/> D 104
Q51.	Which one of the following is a complex salt? <input type="radio"/> A $Zn(OH)Cl$ <input type="radio"/> B $K_4[Fe(CN)_6]$ <input type="radio"/> C $K_2SO_4$ <input type="radio"/> D $CaOCl_2$	Q61.	What is the charge on carbonate radical? <input type="radio"/> A 1- <input type="radio"/> B 2- <input type="radio"/> C 3- <input type="radio"/> D 0
Q52.	Which one of the following is a mixed salt? <input type="radio"/> A $CaOCl_2$ <input type="radio"/> B $Zn(OH)Cl$ <input type="radio"/> C $K_4[Fe(CN)_6]$ <input type="radio"/> D $NaHSO_4$	Q62.	What is the valency of Ca in $CaCO_3$ ? <input type="radio"/> A 3 <input type="radio"/> B 1 <input type="radio"/> C 2 <input type="radio"/> D 0
Q5.	Which one of the following is a basic salt? <input type="radio"/> A $K_4[Fe(CN)_6]$ <input type="radio"/> B $NaHSO_4$ <input type="radio"/> C $Zn(OH)Cl$ <input type="radio"/> D $CaOCl_2$	Q63.	Number of replaceable $H^+$ ions present in an acid is called <input type="radio"/> A acidity <input type="radio"/> B basicity <input type="radio"/> C valency <input type="radio"/> D atomicity
Q54.	Atomic mass of Cu is _____. <input type="radio"/> A 56 <input type="radio"/> B 63 <input type="radio"/> C 56 <input type="radio"/> D 66	Q64.	Number of replaceable $OH^-$ ions present in a base is called <input type="radio"/> A acidity <input type="radio"/> B atomicity <input type="radio"/> C basicity <input type="radio"/> D valency
Q55.	Atomic mass of Cl is _____. <input type="radio"/> A 35.5 <input type="radio"/> B 40 <input type="radio"/> C 39 <input type="radio"/> D 17	Q65.	What is the acidity of $Al(OH)_3$ ? <input type="radio"/> A 3 <input type="radio"/> B 1 <input type="radio"/> C 2 <input type="radio"/> D 4
Q56.	Calculate the molecular mass of $Ca(OH)_2$ . <input type="radio"/> A 77 <input type="radio"/> B 74 <input type="radio"/> C 70 <input type="radio"/> D 38	Q66.	What is the acidity of KOH? <input type="radio"/> A 1 <input type="radio"/> B 2 <input type="radio"/> C 3 <input type="radio"/> D 0
Q57.	What is the charge on phosphate radical? <input type="radio"/> A 1- <input type="radio"/> B 2- <input type="radio"/> C 3- <input type="radio"/> D 4-	Q67.	What is the basicity of $H_3PO_4$ ? <input type="radio"/> A 3 <input type="radio"/> B 1 <input type="radio"/> C 2 <input type="radio"/> D 4
Q58.	What is the basicity of $CH_3COOH$ ? <input type="radio"/> A 3 <input type="radio"/> B 1 <input type="radio"/> C 2 <input type="radio"/> D 4	Q68.	What is the basicity of $H_2SO_4$ ? <input type="radio"/> A 3 <input type="radio"/> B 1 <input type="radio"/> C 2 <input type="radio"/> D 4

Q69.	Number of moles of solute present in one litre of solution is called as  <input type="radio"/> (A) normality <input type="radio"/> (B) molarity <input type="radio"/> (C) molality <input type="radio"/> (D) formality	Q78.	Calculate the molarity of a solution, which contain 4.0 gram of NaOH in 1lit. of its solution.  <input type="radio"/> (A) 1M <input type="radio"/> (B) 0.1M <input type="radio"/> (C) 0.05M <input type="radio"/> (D) 0.5M
Q70.	Number of gram equivalent of solute present in one litre of solution is called as  <input type="radio"/> (A) normality <input type="radio"/> (B) molarity <input type="radio"/> (C) molality <input type="radio"/> (D) formality	Q79.	Calculate the molality of 0.1M solution of KCl. The density of the solution is 0.12 gm/ml.  <input type="radio"/> (A) 8 m <input type="radio"/> (B) 8.08 m <input type="radio"/> (C) 0.88 m <input type="radio"/> (D) 0.088 m
Q71.	Number of moles of solute present in one kg of solvent is called as  <input type="radio"/> (A) normality <input type="radio"/> (B) molarity <input type="radio"/> (C) molality <input type="radio"/> (D) formality	Q80.	Which one is incorrect?  <input type="radio"/> (A) $\text{pH} = -\log_{10}[\text{H}^+]$ <input type="radio"/> (B) $\text{pOH} = -\log_{10}[\text{OH}^-]$ <input type="radio"/> (C) $[\text{H}^+][\text{OH}^-] = 10^{-14}$ <input type="radio"/> (D) $\text{pH} + \text{pOH} = 10^{-14}$
Q72.	What is the unit of molarity?  <input type="radio"/> (A) mol/lit <input type="radio"/> (B) lit/mol <input type="radio"/> (C) mol/kg <input type="radio"/> (D) kg/mol	Q81.	For acidic substance  <input type="radio"/> (A) $\text{pH} > 7$ <input type="radio"/> (B) $\text{pH} = 7$ <input type="radio"/> (C) $\text{pH} < 7$ <input type="radio"/> (D) $\text{pH} = 8$
Q73.	What is the unit of molality?  <input type="radio"/> (A) mol/lit <input type="radio"/> (B) lit/mol <input type="radio"/> (C) mol/kg <input type="radio"/> (D) kg/mol	Q82.	For basic substance  <input type="radio"/> (A) $\text{pH} > 7$ <input type="radio"/> (B) $\text{pH} = 7$ <input type="radio"/> (C) $\text{pH} < 7$ <input type="radio"/> (D) $\text{pH} = 6$
Q74.	Calculate the amount of $\text{Na}_2\text{CO}_3$ present in 1 lit. of N/10 solution.  <input type="radio"/> (A) 53 gm <input type="radio"/> (B) 5.3 gm <input type="radio"/> (C) 106 gm <input type="radio"/> (D) 10.6 gm	Q83.	Calculate the pH of 0.001 N HCl.  <input type="radio"/> (A) 2 <input type="radio"/> (B) 11 <input type="radio"/> (C) 4 <input type="radio"/> (D) 3
Q75.	Calculate the amount of $\text{H}_2\text{SO}_4$ present in 1 lit. of M/10 solution.  <input type="radio"/> (A) 98 gm <input type="radio"/> (B) 49 gm <input type="radio"/> (C) 9.8 gm <input type="radio"/> (D) 4.9 gm	Q84.	Calculate the pH of 0.001 N NaOH.  <input type="radio"/> (A) 2 <input type="radio"/> (B) 11 <input type="radio"/> (C) 4 <input type="radio"/> (D) 3
Q76.	Calculate the equivalent weight of $\text{Al}_2(\text{SO}_4)_3$ .  <input type="radio"/> (A) 342 <input type="radio"/> (B) 114 <input type="radio"/> (C) 170 <input type="radio"/> (D) 57	Q85.	Calculate the pH of 0.001 M $\text{H}_2\text{SO}_4$ .  <input type="radio"/> (A) 3 <input type="radio"/> (B) 4 <input type="radio"/> (C) 2.69 <input type="radio"/> (D) 11
Q77.	Calculate the normality of a solution, which contain 4.9 gram of $\text{H}_2\text{SO}_4$ in 1lit. of its solution.  <input type="radio"/> (A) 1N <input type="radio"/> (B) 0.1N <input type="radio"/> (C) 0.05N <input type="radio"/> (D) 0.5N	Q86.	Calculate the pH of 0.001 N $\text{H}_2\text{SO}_4$ .  <input type="radio"/> (A) 3 <input type="radio"/> (B) 4 <input type="radio"/> (C) 2.69 <input type="radio"/> (D) 11

Q87.	The molarity of $\text{Na}_2\text{CO}_3$ solution is 0.05 M. what is its normality?  <input type="radio"/> A 0.1 <input type="radio"/> B 0.025 <input type="radio"/> C 0.01 <input type="radio"/> D 0.25	Q96.	By the electrolysis of Molten NaCl  <input type="radio"/> A $\text{Na}_2$ is deposited at cathode & $\text{Cl}_2$ at anode <input type="radio"/> B $\text{H}_2$ is deposited at cathode & $\text{Cl}_2$ at anode <input type="radio"/> C $\text{Cl}_2$ is deposited at cathode & $\text{Na}_2$ anode <input type="radio"/> D $\text{Cl}_2$ is deposited at cathode & $\text{H}_2$ at anode
Q88.	How many grams of KOH are required to prepare 2 litre of its solution having pH 12?  <input type="radio"/> A 0.56 gm <input type="radio"/> B 1.12 gm <input type="radio"/> C 56 gm <input type="radio"/> D 112 gm	Q97.	Faraday's first law of electrolysis state that  <input type="radio"/> A $W=z.c.t$ <input type="radio"/> B $W=z/c.t$ <input type="radio"/> C $A_{wt}/B_{wt}=A_{Eq.wt}/B_{Eq.wt}$ <input type="radio"/> D $A_{wt}/B_{wt}= B_{Eq.wt} / A_{Eq.wt}$
Q89.	11.2 gm of caustic potash are present in 5 litre of solution. Find the pH of the solution.  <input type="radio"/> A 12.602 <input type="radio"/> B 11 <input type="radio"/> C 11.206 <input type="radio"/> D 12	Q98.	Faraday's second law of electrolysis state that  <input type="radio"/> A $W=z.c.t$ <input type="radio"/> B $W=z/c.t$ <input type="radio"/> C $A_{wt}/B_{wt}=A_{Eq.wt}/B_{Eq.wt}$ <input type="radio"/> D $A_{wt}/B_{wt}= B_{Eq.wt} / A_{Eq.wt}$
Q90.	Calculate the amount of $\text{Na}_2\text{CO}_3$ contain in 1 L of Decinormal solution.  <input type="radio"/> A 53 g <input type="radio"/> B 5.3 g <input type="radio"/> C 106 g <input type="radio"/> D 10.6	Q99.	1Faraday = _____ c  <input type="radio"/> A $+1.6*10^{-19}$ <input type="radio"/> B 965000 <input type="radio"/> C 96500 <input type="radio"/> D $-1.6*10^{-19}$
Q91.	Substance which conduct electricity in their fused state or in aqueous solution is called  <input type="radio"/> A electrolyte <input type="radio"/> B metallic conductor <input type="radio"/> C non electrolyte <input type="radio"/> D analyte	Q100.	Define electrochemical equivalent.  <input type="radio"/> A gm.eqv mass/96500 <input type="radio"/> B $96500/n$ <input type="radio"/> C $96500/\text{gm.eqv mass}$ <input type="radio"/> D $\text{gm.eqv mass}*96500$
Q92.	Which one from the followings is a strong electrolyte?  <input type="radio"/> A $\text{NH}_4\text{OH}$ <input type="radio"/> B $\text{CH}_3\text{COOH}$ <input type="radio"/> C NaCl <input type="radio"/> D $\text{H}_2\text{CO}_3$	Q101.	Unit of charge is _____.  <input type="radio"/> A ampere <input type="radio"/> B coulomb <input type="radio"/> C ohm <input type="radio"/> D volt
Q93.	Which one from the followings is a non-electrolyte?  <input type="radio"/> A $\text{NH}_4\text{OH}$ <input type="radio"/> B $\text{C}_6\text{H}_{12}\text{O}_6$ <input type="radio"/> C NaCl <input type="radio"/> D $\text{H}_2\text{CO}_3$	Q102.	Unit of current is _____.  <input type="radio"/> A ampere <input type="radio"/> B coulomb <input type="radio"/> C ohm <input type="radio"/> D volt
Q94.	Decomposition of electrolytes in solution by the passage of electric current is known as  <input type="radio"/> A analyte <input type="radio"/> B electrolysis <input type="radio"/> C electric effect <input type="radio"/> D electrophoresis	Q103.	Choose the correct option  <input type="radio"/> A coulomb=ampere x second <input type="radio"/> B ampere=coulomb x second <input type="radio"/> C coulomb=ampere/second <input type="radio"/> D ampere=second/coulomb
Q95.	By the electrolysis of aqs. NaCl  <input type="radio"/> A $\text{Na}_2$ is deposited at cathode & $\text{Cl}_2$ at anode <input type="radio"/> B $\text{H}_2$ is deposited at cathode & $\text{Cl}_2$ at anode <input type="radio"/> C $\text{Cl}_2$ is deposited at cathode & $\text{Na}_2$ anode <input type="radio"/> D $\text{Cl}_2$ is deposited at cathode & $\text{H}_2$ at anode	Q104.	Calculate the electrochemical equivalent of Zn. (atomic mass of Zn =65)  <input type="radio"/> A 0.0033 <input type="radio"/> B 0.033 <input type="radio"/> C 0.00033 <input type="radio"/> D 0.33

Q105.	Find the mass of copper deposited from copper sulphate solution by a current of 0.25 ampere flowing for 1hr. (atomic mass of Cu=63)  Ⓐ 0.4 gm                      Ⓑ 0.3 gm Ⓒ 0.2 gm                      Ⓓ 0.4 gm	Q106.	Calculate the electrochemical equivalent of silver that of hydrogen being 0.0000104 (atomic mass of Ag =108)  Ⓐ 0.00112                      Ⓑ 0.122 Ⓒ 0.00211                      Ⓓ 0.211

# JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

SUB-ENGINEERING CHEMISTRY

MCQ UNIT-2

Q1.	Write the chemical formula of rusted iron.  (A) $\text{Fe}_2\text{O}_3$ (B) $\text{Fe}_2\text{O}_3 \cdot x \text{H}_2\text{O}$ (C) $\text{Fe}_3\text{O}_4$ (D) $\text{Fe}_3\text{O}_4 \cdot x \text{H}_2\text{O}$	Q8.	Which one of the following is an ore of Al?  (A) haematite                      (B) limestone (C) bauxite                         (D) cuprite
Q2.	The process of covering iron with Zinc is called  (A) galvanisation                (B) electroplating (C) electrodeposition          (D) electrorefining	Q9.	Which one of the following is an ore of iron?  (A) haematite                      (B) limestone (C) bauxite                         (D) cuprite
Q3.	The minerals from which the metals can be extracted conveniently or profitably are called  (A) flux                                (B) slag (C) ore                                 (D) gangue	Q10.	Which one of the following is an ore of copper?  (A) haematite                      (B) limestone (C) bauxite                         (D) cuprite
Q4.	The substance which combines with gangue to form light and easily fusible material is called  (A) flux                                (B) slag (C) ore                                 (D) gangue	Q11.	The method which is employed for the concentration of sulphide ores is  (A) gravity separation          (B) magnetic separation (C) froth floatation              (D) leaching
Q5.	The substance which combines with gangue to form light and easily fusible material, which is not soluble in the molten metal is called  (A) flux                                (B) slag (C) ore                                 (D) gangue	Q12.	The method which is employed for the concentration of magnetic ores is  (A) gravity separation          (B) magnetic separation (C) froth floatation              (D) leaching
Q6.	Which one amongst the following is an acidic flux?  (A) CaO                                (B) $\text{CaSiO}_3$ (C) $\text{CaCO}_3$ (D) $\text{SiO}_2$	Q13.	The method which is employed for the concentration of heavier ores is  (A) gravity separation          (B) magnetic separation (C) froth floatation              (D) leaching
Q7.	The process of heating the concentrated ore in absence of air at a temperature just below its melting point is called  (A) roasting                        (B) leaching (C) calcination                    (D) smelting	Q14.	The process of separation impurities from the ore by adding suitable chemical is called  (A) gravity separation          (B) magnetic separation (C) froth floatation              (D) leaching



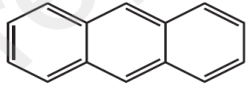
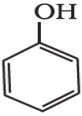

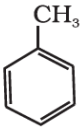
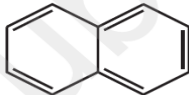
Q15.	The process of heating the concentrated ore in controlled supply of oxygen is called  <input type="radio"/> (A) roasting <input type="radio"/> (B) leaching <input type="radio"/> (C) calcination <input type="radio"/> (D) smelting	Q22.	Galena, copper pyrite is concentrated by  <input type="radio"/> (A) gravity separation <input type="radio"/> (B) magnetic separation <input type="radio"/> (C) froth floatation <input type="radio"/> (D) leaching
Q16.	The conversion of metal oxide to metal by adding suitable quantity of coke, charcoal or reducing agent with metal oxide at high temperature above its melting point is called  <input type="radio"/> (A) roasting <input type="radio"/> (B) leaching <input type="radio"/> (C) calcination <input type="radio"/> (D) smelting	Q23.	Composition of bronze  <input type="radio"/> (A) Cu=60-80%, Zn=40-20% <input type="radio"/> (B) Cu=75-90%, Sn=25-10% <input type="radio"/> (C) Al=95%, Cu=4%, Mn=0.5%, Mg=0.5% <input type="radio"/> (D) Fe=60%, Al=12%, Ni=20%, Co=8%
Q17.	Copper is extracted from sulphide ore using the method  <input type="radio"/> (A) carbon reduction <input type="radio"/> (B) auto reduction <input type="radio"/> (C) carbon monoxide reduction <input type="radio"/> (D) hydrogen reduction	Q24.	Composition of alnico  <input type="radio"/> (A) Cu=60-80%, Zn=40-20% <input type="radio"/> (B) Cu=75-90%, Sn=25-10% <input type="radio"/> (C) Al=95%, Cu=4%, Mn=0.5%, Mg=0.5% <input type="radio"/> (D) Fe=60%, Al=12%, Ni=20%, Co=8%
Q18.	In the electrolytic refining of copper Ag and Au are found  <input type="radio"/> (A) on anode <input type="radio"/> (B) in electrolyte solution <input type="radio"/> (C) in anode mud <input type="radio"/> (D) in cathode mud	Q25.	The alloy which contain mercury is called  <input type="radio"/> (A) ferro alloy <input type="radio"/> (B) amalgams <input type="radio"/> (C) alnico <input type="radio"/> (D) brass
Q19.	Which method metal refining is used to obtained metals of very high purity?  <input type="radio"/> (A) zone refining <input type="radio"/> (B) distillation <input type="radio"/> (C) electrolytic refining <input type="radio"/> (D) liquation	Q26.	The alloy which is used for making air ship  <input type="radio"/> (A) brass <input type="radio"/> (B) bronze <input type="radio"/> (C) alnico <input type="radio"/> (D) duralumin
Q20.	Name the metal which is generally purified by cupellation  <input type="radio"/> (A) gold <input type="radio"/> (B) silver <input type="radio"/> (C) copper <input type="radio"/> (D) zinc	Q27.	Which one is an example of ferroalloy?  <input type="radio"/> (A) alnico <input type="radio"/> (B) brass <input type="radio"/> (C) bronze <input type="radio"/> (D) bell metal
Q21.	Composition of brass  <input type="radio"/> (A) Cu=60-80%, Zn=40-20% <input type="radio"/> (B) Cu=75-90%, Sn=25-10% <input type="radio"/> (C) Al=95%, Cu=4%, Mn=0.5%, Mg=0.5% <input type="radio"/> (D) Fe=60%, Al=12%, Ni=20%, Co=8%	Q28.	The alloy which is used for making permanent magnet is  <input type="radio"/> (A) brass <input type="radio"/> (B) bronze <input type="radio"/> (C) alnico <input type="radio"/> (D) duralumin

# JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

SUB-ENGINEERING CHEMISTRY

MCQ UNIT-3

Q1.	Saturated organic compounds generally contain <input type="radio"/> A C-C triple bond <input type="radio"/> B C-C single bond <input type="radio"/> C C-C double bond <input type="radio"/> D no bond	Q9.	Find the number of C atom present in isobutane. <input type="radio"/> A 4 <input type="radio"/> B 5 <input type="radio"/> C 6 <input type="radio"/> D 3
Q2.	Unsaturated hydrocarbons generally contain <input type="radio"/> A C-C double bond/triple bond <input type="radio"/> B only C-C single bond <input type="radio"/> C no bond <input type="radio"/> D C-C Quadruples bond	Q10.	Which one amongst the following is an aromatic compound? <input type="radio"/> A benzene <input type="radio"/> B cyclohexene <input type="radio"/> C cyclopentadiene <input type="radio"/> D cyclobutadiene
Q3.	General formula of alkane is <input type="radio"/> A $C_nH_{2n+1}$ <input type="radio"/> B $C_nH_{2n+2}$ <input type="radio"/> C $C_nH_{2n}$ <input type="radio"/> D $C_nH_{2n-2}$	Q11.	Which one amongst the following is not a characteristic of aromatic compound? <input type="radio"/> A cyclic <input type="radio"/> B planer <input type="radio"/> C contain $(4n+2)\pi$ e's <input type="radio"/> D each 'C' is $sp^3$ hybridised
Q4.	General formula of alkene is <input type="radio"/> A $C_nH_{2n+1}$ <input type="radio"/> B $C_nH_{2n+2}$ <input type="radio"/> C $C_nH_{2n}$ <input type="radio"/> D $C_nH_{2n-2}$	Q12.	Name the functional group present in alcohol. <input type="radio"/> A -CHO <input type="radio"/> B -OH <input type="radio"/> C -COOH <input type="radio"/> D -C=O
Q5.	General formula of alkyne is <input type="radio"/> A $C_nH_{2n+1}$ <input type="radio"/> B $C_nH_{2n+2}$ <input type="radio"/> C $C_nH_{2n}$ <input type="radio"/> D $C_nH_{2n-2}$	Q13.	Which one amongst the following is the structure of ethanol? <input type="radio"/> A $CH_3-OH$ <input type="radio"/> B $HCOOH$ <input type="radio"/> C $CH_3-CH_2-OH$ <input type="radio"/> D $CH_3-COOH$
Q6.	What is the functional group of alkenes? <input type="radio"/> A C-C <input type="radio"/> B C=C <input type="radio"/> C $C\equiv C$ <input type="radio"/> D -O-	Q14.	Name this compound $CH_3-C(Cl)_2-CH_2-CH_2-CH_2-OH$ . <input type="radio"/> A 2-dichloro pentanol <input type="radio"/> B 4,4-dichloro pentanol <input type="radio"/> C 2,2-dichloro pentanol <input type="radio"/> D 2,2-dichloro pentan-5-ol
Q7.	What is the functional group of alkynes? <input type="radio"/> A C-C <input type="radio"/> B C=C <input type="radio"/> C $C\equiv C$ <input type="radio"/> D -O-	Q15.	Which one amongst the following is not an aromatic compound? <input type="radio"/> A benzene <input type="radio"/> B naphthalene <input type="radio"/> C cyclobutadiene <input type="radio"/> D anthracene
Q8.	Name this compound $CH\equiv C-CH_2-CH=CH_2$ <input type="radio"/> A pent-1-en-4-yne <input type="radio"/> B pent-1-yn-4-ene <input type="radio"/> C penta-1,4-diene <input type="radio"/> D penta-1,4-diyne	Q16.	Find the number of $\pi$ -electrons present in benzene. <input type="radio"/> A 4 $\pi$ -electrons <input type="radio"/> B 6 $\pi$ -electrons <input type="radio"/> C 3 $\pi$ -electrons <input type="radio"/> D 2 $\pi$ -electrons

Q17	<p>Correct IUPAC name for this given compound is</p> $\begin{array}{c} \text{CH}_3 - \text{CH}_2 - \text{CH} - \text{CH}_2 - \text{CH}_3 \\   \\ \text{OH} \end{array}$ <p> <input type="radio"/> (A) pentanol  <input type="radio"/> (B) pentan-3-ol  <input type="radio"/> (C) 3-hydroxy pentane  <input type="radio"/> (D) iso-pentanol </p>	<p>Q21. The number of <math>\pi</math>-electrons in this given compound is ____.</p>  <p> <input type="radio"/> (A) 7 <math>\pi</math>-electrons  <input type="radio"/> (B) 14 <math>\pi</math>-electrons  <input type="radio"/> (C) 22 <math>\pi</math>-electrons  <input type="radio"/> (D) 16 <math>\pi</math>-electrons </p>
Q18.	<p>Correct IUPAC name for this given compound is</p> $\begin{array}{c} \text{CH}_3 \\   \\ \text{CH}_3 - \text{C} - \text{CH}_2\text{OH} \\   \\ \text{CH}_3 \end{array}$ <p> <input type="radio"/> (A) 2,2-dimethyl propan-1-ol  <input type="radio"/> (B) 2,2-dimethyl propan-3-ol  <input type="radio"/> (C) pentanol  <input type="radio"/> (D) 1-hydroxy neopentane </p>	<p>Q22. Correct IUPAC name for this given compound is</p> $\begin{array}{c} \text{CH}_3 - \text{C} \equiv \text{C} - \text{CH} - \text{CH}_3 \\   \\ \text{CH}_3 \end{array}$ <p> <input type="radio"/> (A) 4-methyl pent-2-yne  <input type="radio"/> (B) 2-methyl pent-3-yne  <input type="radio"/> (C) 4-methyl pent-2-ene  <input type="radio"/> (D) 2-methyl pent-3-ene </p>
Q19	<p>Name this given compound.</p>  <p> <input type="radio"/> (A) Toluene  <input type="radio"/> (B) Phenol  <input type="radio"/> (C) benzoic acid  <input type="radio"/> (D) benzene </p>	<p>Q23. which statement about this given structure is incorrect?</p>  <p> <input type="radio"/> (A) it is aromatic compound  <input type="radio"/> (B) planner  <input type="radio"/> (C) Non aromatic compound  <input type="radio"/> (D) contain 6 <math>\pi</math>-electrons </p>
Q20	<p>Name this given compound.</p>  <p> <input type="radio"/> (A) Toluene  <input type="radio"/> (B) Phenol  <input type="radio"/> (C) benzoic acid  <input type="radio"/> (D) benzene </p>	<p>Q24. which statement about this given structure is incorrect?</p>  <p> <input type="radio"/> (A) it is aromatic compound  <input type="radio"/> (B) planner  <input type="radio"/> (C) Non aromatic compound  <input type="radio"/> (D) contain 10 <math>\pi</math>-electrons </p>

# JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

SUB-ENGINEERING CHEMISTRY

MCQ UNIT-4

<p>Q1. Hardness of water is due to the presence of salts of _____.</p> <p>Ⓐ potassium                      Ⓑ chlorine Ⓒ Magnesium                      Ⓓ boron</p>	<p>Q7. The chemical equivalent of MgSO<sub>4</sub> salt is _____</p> <p>Ⓐ 60                                      Ⓑ 82 Ⓒ 68                                      Ⓓ 34</p>
<p>Q2. Select the incorrect statement from the following option.</p> <p>Ⓐ Water which does not form lather with soap and forms white scum is called hard water Ⓑ Hard water contains dissolved calcium and magnesium salts in it Ⓒ In hard water, cleansing quality of soap is depressed Ⓓ Due to the presence of dissolved hardness-producing salts, the boiling point of water is depressed</p>	<p>Q8. Select the incorrect statement from the following option.</p> <p>Ⓐ Permanent hardness is due to dissolved chlorides and sulphates of calcium and magnesium Ⓑ It can be removed by mere boiling of water Ⓒ It is also known as non-alkaline hardness Ⓓ The difference between the total hardness and the alkaline hardness gives the non-alkaline hardness</p>
<p>Q3. Which of the following is not a unit of hardness?</p> <p>Ⓐ parts per million    Ⓑ degree French Ⓒ degree centigrade    Ⓓ degree Clarke</p>	<p>Q9. Hardness of water is conventionally expressed in terms of equivalent amount of _____</p> <p>Ⓐ H<sub>2</sub>CO<sub>3</sub>                      Ⓑ CaCO<sub>3</sub> Ⓒ MgCO<sub>3</sub>                      Ⓓ Na<sub>2</sub>CO<sub>3</sub></p>
<p>Q4. Select the incorrect statement from the following option.</p> <p>Ⓐ cold lime soda process is conducted at room temperature Ⓑ takes about 24 hrs. to complete Ⓒ hardness left in water is about 60 ppm Ⓓ no coagulant is needed</p>	<p>Q10. Select the incorrect statement from the following option.</p> <p>Ⓐ cold lime soda process is conducted at high temperature (80-150°C) Ⓑ takes about 15 minutes to complete Ⓒ hardness left in water is about 30 ppm Ⓓ coagulant is needed</p>
<p>Q5. Which one of the following reactions shows the softening of water by lime soda process?</p> <p>Ⓐ <math>\text{Ca}(\text{HCO}_3)_2 + \text{Ca}(\text{OH})_2 \longrightarrow 2\text{CaCO}_3 + 2\text{H}_2\text{O}</math> Ⓑ <math>\text{CaCl}_2 + \text{Na}_2\text{CO}_3 \longrightarrow \text{CaCO}_3 + 2\text{NaCl}</math> Ⓒ <math>\text{Ca}(\text{HCO}_3)_2 \xrightarrow{\Delta} 2\text{CaCO}_3 + 2\text{H}_2\text{O} + \text{CO}_2</math> Ⓓ <math>\text{Ca}(\text{resin})_2 + \text{HCl} \longrightarrow \text{CaCl}_2 + 2\text{H}^+ - \text{resin}</math></p>	<p>Q11. Which one of the following reactions shows the permanent softening of water by soda process?</p> <p>Ⓐ <math>\text{Ca}(\text{HCO}_3)_2 + \text{Ca}(\text{OH})_2 \longrightarrow 2\text{CaCO}_3 + 2\text{H}_2\text{O}</math> Ⓑ <math>\text{CaCl}_2 + \text{Na}_2\text{CO}_3 \longrightarrow \text{CaCO}_3 + 2\text{NaCl}</math> Ⓒ <math>\text{Ca}(\text{HCO}_3)_2 \xrightarrow{\Delta} 2\text{CaCO}_3 + 2\text{H}_2\text{O} + \text{CO}_2</math> Ⓓ <math>\text{Ca}(\text{resin})_2 + \text{HCl} \longrightarrow \text{CaCl}_2 + 2\text{H}^+ - \text{resin}</math></p>
<p>Q6. Formula of lime water is _____.</p> <p>Ⓐ Na<sub>2</sub>CO<sub>3</sub> . 10H<sub>2</sub>O                      Ⓑ Ca(OH)<sub>2</sub> Ⓒ CaCO<sub>3</sub>                                      Ⓓ Ca(HCO<sub>3</sub>)<sub>2</sub></p>	<p>Q12. Which of the following is an example of solid lubricants?</p> <p>Ⓐ petroleum                                      Ⓑ graphite Ⓒ wax    Ⓓ castor oil</p>

Q13.	Select the incorrect statement from the following option. (A) Lubricants reduces friction (B) Lubricants minimise energy (C) Lubricants increases the expansion of metal (D) Lubricants act as coolant by removing the heat of friction	Q20.	Composition of LPG is (A) H <sub>2</sub> =8-12%, N <sub>2</sub> =52-55%, CO=22-30%, CO <sub>2</sub> =3% (B) H <sub>2</sub> =51%, N <sub>2</sub> =4%, CO=41%, CO <sub>2</sub> =4% (C) CH <sub>4</sub> =70-90%, C <sub>2</sub> H <sub>6</sub> =4-9% (D) n-butane=27%, isobutane=25%, butene=43%, propane=2.5%, propene=2.5%
Q14.	The amount of heat released by the complete combustion of one gram of food/fuel is called (A) specific heat                      (B) latent heat (C) molar heat                          (D) calorific value	Q21.	A polymer which is formed from two or more different monomers through covalent bond is (A) copolymer (B) homomer (C) degree of polymerisation (D) condensed polymer
Q15.	Composition of petrol is (A) C=84%, H=16%, S=≤1% (B) C=84%, H=15%, N+S+O=10% (C) C=85%, H=12%, Others=3% (D) C=80%, H=15%, O=5%	Q22.	Combination through different functional groups of monomers with elimination of small molecule like water is termed as (A) addition polymerization (B) condensation polymerization (C) copolymerization (D) degree of polymerization
Q16.	Composition of diesel is (A) C=84%, H=16%, S=≤1% (B) C=84%, H=15%, N+S+O=10% (C) C=85%, H=12%, Others=3% (D) C=80%, H=15%, O=5%	Q23.	The number of repeating units present in a polymer is called (A) addition polymerization (B) condensation polymerization (C) copolymerization (D) degree of polymerization
Q17.	Composition of kerosene is (A) C=84%, H=16%, S=≤1% (B) C=84%, H=15%, N+S+O=10% (C) C=85%, H=12%, Others=3% (D) C=80%, H=15%, O=5%	Q24.	Natural rubber is a polymer of (A) butadiene (B) ethene (C) isoprene (D) vinyl chloride
Q18.	Composition of Water gas is (A) H <sub>2</sub> =8-12%, N <sub>2</sub> =52-55%, CO=22-30%, CO <sub>2</sub> =3% (B) H <sub>2</sub> =51%, N <sub>2</sub> =4%, CO=41%, CO <sub>2</sub> =4% (C) C=84%, H=15%, N+S+O=10% (D) C=80%, H=15%, O=5%	Q25.	The vulcanized rubber has (a) High water absorption, resistant to oxidation and good elasticity (b) High water absorption, susceptible to oxidation and no elasticity (c) High water absorption, susceptible to oxidation and good elasticity (d) Low water absorption, resistance to oxidation and good elasticity.
Q19.	Composition of Producer gas is (A) H <sub>2</sub> =8-12%, N <sub>2</sub> =52-55%, CO=22-30%, CO <sub>2</sub> =3% (B) H <sub>2</sub> =51%, N <sub>2</sub> =4%, CO=41%, CO <sub>2</sub> =4% (C) C=84%, H=15%, N+S+O=10% (D) C=80%, H=15%, O=5%	Q26.	Chose the correct option (A) polythene, PVC, Teflon are example of thermoplastic polymer. (B) Bakelite, terylene are example of thermoplastic polymer. (C) thermosetting polymer can be remolded, reshaped (D) thermosetting are usually linearstructure

Q27.	<p>Monomer of polythene is</p> <p>Ⓐ vinyl chloride Ⓑ ethylene Ⓒ phenol &amp; formaldehyde Ⓓ phenol</p>	Q29.	<p>Monomer of poly vinyl chloride is</p> <p>Ⓐ vinyl chloride Ⓑ ethylene Ⓒ phenol &amp; formaldehyde Ⓓ phenol</p>
Q28.	<p>Monomer of bakelite is</p> <p>Ⓐ vinyl chloride Ⓑ ethylene Ⓒ phenol &amp; formaldehyde Ⓓ phenol</p>	Q30.	<p>Monomer of polythene is</p> <p>Ⓐ vinyl chloride Ⓑ ethylene Ⓒ phenol &amp; formaldehyde Ⓓ phenol</p>
Q31.	<p>the chemical substances used to kill or prevent growth of <b>insects</b> is called</p> <p>Ⓐ Insecticides Ⓑ Fungicides Ⓒ Herbicides Ⓓ Bactericides</p>	Q32.	<p>The biocidal chemical compounds or biological organisms used to kill parasitic fungi or their spores. is called</p> <p>Ⓐ Insecticides Ⓑ Fungicides Ⓒ Herbicides Ⓓ Bactericides</p>
Q33.	<p>the chemical substances used to destroy unwanted vegetation (like weeds) is called</p> <p>Ⓐ Insecticides Ⓑ Fungicides Ⓒ Herbicides Ⓓ Bactericides</p>	Q34.	<p>Which of the following is a bacterial biofertilizer?</p> <p>Ⓐ Gammaxene Ⓑ Copper oxychloride Ⓒ carbamate Ⓓ Rhizobium</p>
Q35.	<p>Which of the following is an algal biofertilizer?</p> <p>Ⓐ Gammaxene Ⓑ Copper oxychloride Ⓒ blue green algae Ⓓ Rhizobium</p>	Q36.	<p>Which of the following is a insecticides?</p> <p>Ⓐ Gammaxene Ⓑ Copper oxychloride Ⓒ carbamate Ⓓ Rhizobium</p>