



Score 90+
159 Must-do
Chemistry Questions
for
Class-12

By-
CG's Chemistry Solutions

1. A solution of glucose (molar mass = 180 g mol^{-1}) in water is labelled as 10% (by mass). What would be the molarity & molality of the solution?
2. The partial pressure of ethane over a saturated solution containing $6.56 \times 10^{-2} \text{ g}$ of ethane is 1 bar. If the solution contains $5.0 \times 10^{-2} \text{ g}$ of ethane, then what will be the partial pressure of gas?
3. Calculate the molarity of each of the following -
 - a) 30 g of $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ in 4.3 L of solution
 - b) 30 mL of 0.5 M H_2SO_4 diluted to 500 mL.
4. H_2S , a toxic gas with rotten egg like smell is used for qualitative analysis. If the solubility of H_2S in water at STP is 0.195 M, calculate K_H .
5. Suggest the most important type of intermolecular interaction in the following -
 - a) n-Hexane + n-Heptane
 - b) $\text{I}_2 + \text{CCl}_4$
 - c) $\text{NaClO}_4 + \text{H}_2\text{O}$
 - d) Acetonitrile + Acetone
 - e) Water + Alcohol
6. What role does the molecular interaction play in solution of alcohol & water?
7. Calculate molarity, molality & mole fraction of KI if the density of 20% (m/m) aqueous KI is 1.202 g/mL.
8. An aqueous solution of 2% non-volatile solute exerts a pressure of 1.004 bar at normal boiling point of solvent. What is the molar mass of solute?
9. Boiling point of water at 750 mm Hg is 99.63°C . How much sucrose is to be added to 500 g of water such that it boils at 100°C ($K_b(\text{H}_2\text{O}) = 0.52 \text{ K Kg mol}^{-1}$).
10. A 5% solution (by mass) of cane sugar in water has freezing point of 271 K. Calculate the freezing point of 5% glucose in water, if freezing point of pure water at 273.15 K.
11. Calculate the osmotic pressure (in Pascal) exerted by a solution prepared by dissolving 1 g of polymer of molar mass 18500 g mol^{-1} in 450 mL of water at 37°C .
12. Determine the amount of CaCl_2 ($i=2.47$) dissolved in 2.5 L of water such that its osmotic pressure is 0.75 atm at 27°C .
13. Calculate the mass of ascorbic acid ($M_w = 176 \text{ g mol}^{-1}$) to be dissolved in 75 g of acetic acid to lower its freezing point by 1.5°C ($K_f = 3.9 \text{ K Kg mol}^{-1}$).
14. Write two differences b/w ideal & non-ideal solution.

15. Define the term - a) Molarity b) Molality c) Mole fraction

Which concentration term is preferred to measure the strength of a solution & why?

16. Can you store copper sulphate solution in a zinc container? Give reason.

17. Calculate the potential of hydrogen electrode in contact with a solution whose pH is 10.

18. Given the standard electrode potential: $K^+/K = -2.93V$, $Ag^+/Ag = 0.80V$, $Hg^{2+}/Hg = 0.79V$, $Mg^{2+}/Mg = -2.37V$, $Cr^{3+}/Cr = -0.74V$. Arrange these metals in increasing order of their reducing power.

19. Write the nerst equation & emf of the following cell at 298 K -

a) $Mg(s) | Mg^{2+}(0.001M) || Cu^{2+}(0.0001M) | Cu(s)$

b) $Fe(s) | Fe^{2+}(0.001M) || H^+(1M) | H_2(g)(1bar) | Pt(s)$

Given: $E^\circ_{Mg^{2+}/Mg} = -2.36V$, $E^\circ_{Cu^{2+}/Cu} = +0.34V$, $E^\circ_{Fe^{2+}/Fe} = -0.44V$

20. The cell in which the following reaction occur has $E^\circ_{cell} = 0.236V$ at 298 K. Calculate the standard Gibbs free energy & the equilibrium constant of the cell reaction.

21. Calculate λ° for acetic acid. Given that - $\lambda^\circ_m(HCl) = 426 \text{ Scm}^2 \text{ mol}^{-1}$, $\lambda^\circ_m(NaCl) = 126 \text{ Scm}^2 \text{ mol}^{-1}$, $\lambda^\circ_m(CH_3COONa) = 91 \text{ Scm}^2 \text{ mol}^{-1}$.

22. The conductivity of 0.20 M solution of KCl at 298 K is 0.0248 Scm^{-1} . Calculate its molar conductivity.

23. The resistance of a conductivity cell containing 0.001 M KCl solution at 298 K is 1500Ω . What is the cell constant if the conductivity of 0.001 M KCl solution at 298 K is $0.146 \times 10^{-3} \text{ Scm}^{-1}$.

24. How much charge is required for the following -

a) Reduction of 1 mole Cu^{2+} to Cu

b) Reduction of 1 mole MnO_4^- to Mn^{2+}

c) Oxidation of 1 mole H_2O_2 to O_2

d) Oxidation of 1 mole FeO to Fe_2O_3

25. Write the chemistry of recharging the lead storage battery, highlighting all the materials that are involved during recharging.

26. Write the two advantages of H_2 - O_2 fuel cell.

27. The conductivity of 0.20 mol L^{-1} solution of KCl is $2.48 \times 10^{-2} \text{ Scm}^{-1}$. Calculate its molar conductivity & degree of dissociation. Given that - $\lambda^\circ(K^+) = 73.5 \text{ Scm}^2 \text{ mol}^{-1}$ & $\lambda^\circ(Cl^-) = 76.5 \text{ Scm}^2 \text{ mol}^{-1}$.

28. Calculate the mass of Ag deposited at cathode when a current of 2A was passed through a solution of $AgNO_3$ for 15 mins.

29. A steady current of 2A was passed through two electrolytic cell X & Y connected in series containing electrolytes $FeSO_4$ & $ZnSO_4$ until 2.8g of Fe deposited at the cathode of cell X. How long did the current flow? Calculate the mass of Zn deposited at the cathode of cell Y. (Atomic mass of Fe = 56, Zn = 65).

30. A solution of $\text{Ni}(\text{NO}_3)_2$ is electrolysed b/w platinum electrodes using a current of 5A for 20 minutes. What mass of Nickel will be deposited at cathode? (Atomic mass of Ni = 58.7)

31. Write two differences b/w Electrochemical cell & Electrolytic cell.

32. Define Kohlrausch's law.

33. State Faraday's law of electrolysis.

34. For a reaction $2\text{A} \rightarrow \text{Product}$, the concⁿ of A decreases from 0.5 mol L^{-1} to 0.4 mol L^{-1} in 10 mins. Calculate the rate of reaction.

35. Mention factors affecting rate of reaction.

36. For the reaction, $2 \text{N}_2\text{O}_5(\text{g}) \rightarrow 4 \text{NO}_2(\text{g}) + \text{O}_2(\text{g})$, the rate of formation of $\text{NO}_2(\text{g})$ is $2.9 \times 10^{-3} \text{ M s}^{-1}$. Calculate the rate of reaction & rate of disappearance of N_2O_5 .

37. For the reaction, $2 \text{H}_2 + 2 \text{NO} \rightleftharpoons 2 \text{H}_2\text{O} + \text{N}_2$, the following data was obtained -

[NO]	[H ₂]	Rate
0.40	0.40	4.6×10^{-3}
0.80	0.40	18.4×10^{-3}
0.40	0.80	9.2×10^{-3}

Calculate - a) Overall order of reaction

b) Rate law

c) Rate constant

38. For a reaction, $\text{A} + \text{B} \rightarrow \text{Product}$, the rate law is given by $\text{rate} = k[\text{A}]^{1/2}[\text{B}]^2$. What is order of reaction? Also write order wrt A & B.

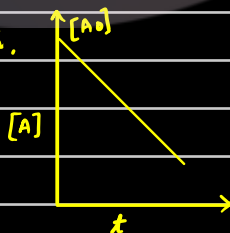
39. A reaction is of second order wrt a reactant. How is the rate of reaction affected, if concⁿ of reactant is -
a) Doubled b) Reduced to half c) Tripled.

40. A reaction, $\text{A} \rightarrow \text{B}$, is represented by graph.

a) Predict the order of reaction.

b) What does the slope of graph represent?

c) Write the unit of rate constant.



41. A first order reaction has a rate constant $1.15 \times 10^{-3} \text{ sec}^{-1}$. How long will 5g of this reactant take to reduce to 3g?

42. A first order reaction takes 20 mins for 25% decomposition. Calculate the time when 75% of the reaction will be completed. ($\log 2 = 0.3010$, $\log 3 = 0.4771$)

43. What is the effect of temperature on the rate constant of a reaction?

44. The rate of chemical reaction doubles for an increase of 10 K in absolute temp for 298 K. Calculate the activation energy.

45. The half life for radioactive decay of ^{14}C is 5730 year. An archaeological artifact containing wood had only 80% of the ^{14}C found in a living tree. Calculate the age of the sample.

46. The following data were obtained during the first order thermal decomposition of SO_2Cl_2 at constant volume - $\text{SO}_2\text{Cl}_2(\text{g}) \longrightarrow \text{SO}_2(\text{g}) + \text{Cl}_2(\text{g})$

Exp. No	Time	Total Pressure
1.	0	0.4
2.	100	0.7

Calculate the rate constant.

47. The rate constant for a first order reaction is 60 sec^{-1} . How much time will it take to reduce the initial conc of reactant to its $1/16$ value.

48. The decomposition of NH_3 on platinum surface, $2\text{NH}_3(\text{g}) \xrightarrow{\text{Pt}} \text{N}_2(\text{g}) + 3\text{H}_2(\text{g})$, is a zero order with $k = 2.5 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$. What are the rates of production of N_2 & H_2 .

49. The $E^\circ(\text{M}^{2+}/\text{M})$ value for copper is positive (+0.34V). What is the possible reason?

50. Silver atom has completely filled d-orbital ($4d^{10}$) in its ground state. How can you say that it is a transition element?

51. Write down the electronic configuration of -

a) Cr^{3+} b) Cu^+ c) Co^{2+} d) Mn^{2+}

52. Which transition metal of the 3d-series exhibits the largest no. of oxidation state & why?

53. Why are Mn^{2+} compounds more stable than Fe^{2+} towards oxidation to their +3 oxidation state?

54. Describe the preparation of potassium dichromate from chromite ore. What is the effect of increasing pH on a solution of $\text{K}_2\text{Cr}_2\text{O}_7$?

55. Complete the following eqⁿ-

a) $2\text{CrO}_4^{2-} + 2\text{H}^+ \longrightarrow$

b) $\text{KMnO}_4 \xrightarrow{\Delta}$

c) $\text{Fe}^{2+} + \text{MnO}_4^- + \text{H}^+ \longrightarrow$

d) $\text{MnO}_4^- + \text{H}_2\text{O} + \text{I}^- \longrightarrow$

e) $\text{Cr}_2\text{O}_7^{2-} + 6\text{Fe}^{2+} + 14\text{H}^+ \longrightarrow$

f) $2\text{MnO}_4^- + 5\text{C}_2\text{O}_4^{2-} + 16\text{H}^+ \longrightarrow$

56. Compare the chemistry of actinoids with that of lanthanoids with reference to -

a) electronic configuration b) Oxidation state c) Chemical reactivity

57. What is Lanthanoid Contraction? What are the causes & consequences of it?

58. Explain -

- Transition metals & many of their compounds show paramagnetic behaviour.
- The enthalpy of atomisation of transition metals is high.
- Transition metals generally form coloured compounds.
- Transition metals & their compounds act as good catalyst.

59. What is meant by disproportionation reaction? Give two examples.

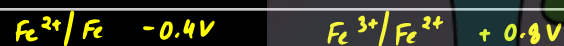
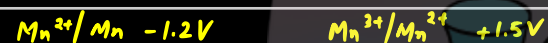
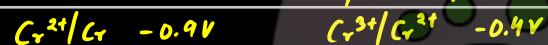
60. Explain why Cu^+ ion is not stable in aqueous solutions?

61. Name the oxometal anions of the first series of transition metals in which the metal exhibits the oxidation state equal to its group number.

62. What are interstitial compounds? Why are such compounds well known for transition metals?

63. Which is stronger reducing agent Cr^{2+} or Fe^{2+} & why?

64. From M^{2+}/M & $\text{M}^{3+}/\text{M}^{2+}$ systems the E° values for some metals are as follows -



- Stability of Fe^{3+} in acid solution as compared to that of Cr^{3+} or Mn^{3+} .
- Ease with which iron can be oxidised as compared to a similar process for either chromium or manganese.

65. Predict which of the following will be coloured in aqueous solution? Give reason.



66. How does the acidified potassium permanganate solution react with -

- iron(II) ions
- SO_2
- Oxalate ions

67. Define the following giving two examples of each -

- Unidentate ligands
- Bidentate ligands
- Ambidentate ligands

68. Write the formula of the complex whose IUPAC name is given -

- Potassium trioxalato chromate(III)
- Hexammine platinum(IV)
- Tetrabromido cuprate(II)
- Pentaammine nitrito-N-cobalt(III)

69. Write IUPAC names of the following complex -

- $[\text{Co}(\text{NH}_3)_5\text{ONO}]^{2+}$
- $[\text{Pt}(\text{NH}_3)_2\text{Cl}(\text{CH}_3\text{NH}_2)]\text{Cl}$
- $[\text{Ti}(\text{H}_2\text{O})_6]^{3+}$

70. Draw the structure of optical isomers of -



71. Give the evidence that $[\text{Co}(\text{NH}_3)_5\text{Cl}]\text{SO}_4$ & $[\text{Co}(\text{NH}_3)_5\text{SO}_4]\text{Cl}$ are ionisation isomers.

72. Give reason for the following -

a) Low spin tetrahedral complexes are not formed.

b) $[\text{Co}(\text{NH}_3)_6]^{3+}$ is an inner orbital complex whereas $[\text{Ni}(\text{NH}_3)_6]^{2+}$ is an outer orbital complex.

73. NiCl_4^{2-} is paramagnetic while $\text{Ni}(\text{CO})_4$ is diamagnetic, though both are tetrahedral. Explain.

74. Why are different colours observed in octahedral & tetrahedral complex for the same metal & same ligands?

75. $[\text{Fe}(\text{CN})_6]^{4-}$ & $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$ are of different colours in dilute solutions. Why?

76. List various types of isomerism possible for coordination compounds.

77. Explain the bonding in coordination compounds in terms of Werner Postulates.

78. Among the following ions which one has the highest magnetic moment value -



79. Arrange the following complexes in increasing order of CFSE (Δ_o) -



80. Define chelate effect with example.

81. Discuss the nature of bonding in metal carbonyls.

82. What do you mean by Crystal Field Splitting Energy? How does the magnitude of Δ_o decide the actual configuration of d-orbital in a coordination entity?

83. Write the structure of the following compounds -

a) 2-chloro-3-methylpentane

b) 1-chloro-4-ethylcyclohexane

c) 4-tert-butyl-3-iodoheptane

d) 1,4-dibromobut-2-ene

e) 1-Bromo-4-sec-butyl-2-methylbenzene

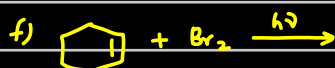
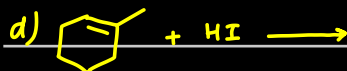
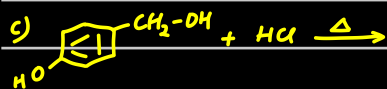
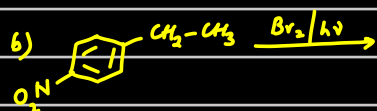
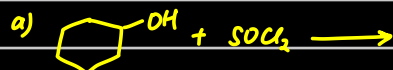
84. Among the isomeric alkanes of molecular formula C_5H_{12} , identify the one that on photochemical chlorination yields -

a) A single monochloride

b) Three isomeric monochloride

c) Four isomeric monochloride

85. Draw the structure of major product in each of the following-

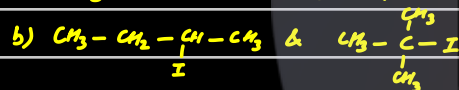
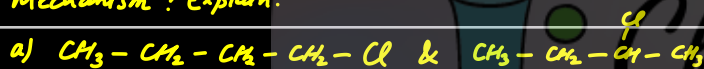


86. Arrange the compounds in order of increasing boiling point-

a) Bromomethane, Bromoform, Chloromethane, Dibromomethane

b) 1-Chloropropane, Isopropyl chloride, 1-chlorobutane

87. Which alkyl halide from the following pairs would you expect to react more rapidly by an S_N2 mechanism? Explain.



88. In the following pairs of halogen compounds, which compounds undergo faster S_N1 reaction-



89. Identify A, B, C, D, E, R & R' in the following-



90. Give reason for the following-

a) Alkyl halides though polar are immiscible with water.

b) Dipole moment of chlorobenzene is lower than that of cyclohexylchloride.

c) Grignard reagent should be prepared under anhydrous conditions.

91. Which compound in each of the following pairs will react faster in S_N2 reactions with OH^- & why?

a) CH_3Br or CH_3I b) $(\text{CH}_3)_3\text{CCl}$ or CH_3Cl

92. Out of ortho- & para- dibromobenzene, which one has higher melting point & why?

93. Write the mechanism of the following reaction-

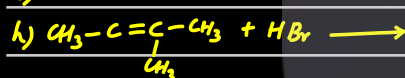
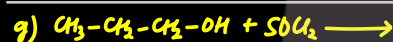
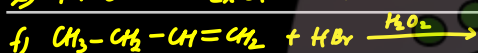
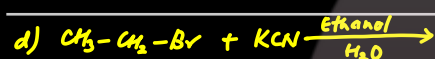
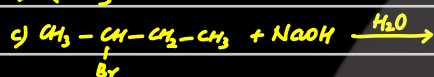
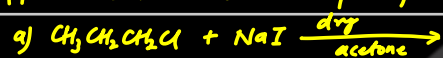


94. Give the uses of Freon 12, DDT, CCl_4 & CHI_3 .

95. Why haloarenes are not reactive towards nucleophilic substitution reaction? Give reason.

96. Define : a) Enantiomers b) Racemic mixture c) Ambidentate Nucleophile

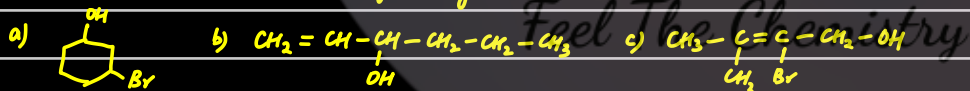
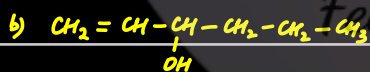
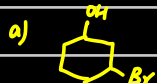
97. Write the structure of major product in each of the following reaction-



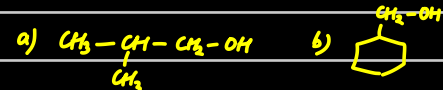
98. Write the structure of the following compounds:

a) Hex-1-en-3-ol b) 2-Methylpropan-2-ol c) 2,6-Dimethylphenol

99. Write IUPAC name of the following:



100. Show how are the following alcohols are prepared by the reaction of a suitable Grignard reagent on Methanal.



101. Ortho & para- nitrophenol are more acidic than phenol. Why? Also draw the structure of corresponding phenoxide ions.

102. Predict the product of the following reaction:



103. Alcohols are comparatively more soluble in water than hydrocarbons of comparable molecular mass. Explain.

104. While separating a mixture of ortho & para-nitrophenol by steam distillation, name the isomer which will be steam volatile.

105. Give the equation of reaction for the preparation of phenol from cumene.

106. Write the mechanism of hydration of ethene to yield ethanol.

107. Give equations of the following reactions -

- a) Oxidation of propan-1-ol with alkaline KMnO_4 .
- b) Bromine in CS_2 with phenol.
- c) Dilute HNO_3 with phenol.
- d) Treating phenol with Chloroform in presence of aq. NaOH .

108. Explain with example: a) Kolbe's reaction b) Reimer-Tiemann reaction c) Williamson synthesis.

109. Write the mechanism of acid dehydration of ethanol to yield ethene.

110. How are the following conversions carried out -

- a) Propene $\rightarrow$ 2-Propanol
- b) Benzyl alcohol from Benzyl chloride
- c) Ethyl magnesium chloride to Propan-1-ol
- d) 2-Methyl propan-2-ol from Methylmagnesium bromide

111. Name the reagents used in the following reactions:

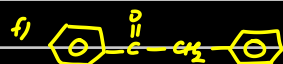
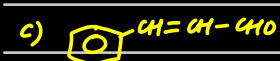
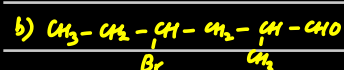
- a) Oxidation of 1° alcohol to carboxylic acid
- b) Oxidation of 1° alcohol to aldehyde
- c) Bromination of phenol to 2,4,6-Tribromophenol
- d) Benzyl alcohol to benzoic acid
- e) Dehydration of propan-2-ol to propene
- f) Butan-2-one to butan-2-ol

112. Explain why is ortho-nitrophenol more acidic than methoxyphenol?

113. Write equations for the following reactions:

- a) Friedel Craft alkylation of Anisole
- b) Nitration of Anisole
- c) Bromination of Anisole in Ethanoic Acid
- d) Friedel craft acetylation of Anisole

114. Write IUPAC Name of the following compounds:



115. Draw the structure of -

- 4-Methylpent-3-en-2-one
- p-Methylbenzaldehyde
- 3-Methylbutanal

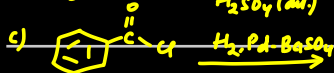
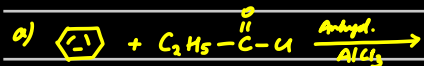
116. Arrange the following compounds in decreasing order of boiling point:



117. Arrange the following compounds in increasing order of their reactivity towards nucleophilic addition reaction:

- Ethanal, Propanal, Propanone, Butanone.
- Benzaldehyde, p-Tolualdehyde, p-Nitrobenzaldehyde, Acetophenone.

118. Write the product formed in the following reaction:



119. Arrange the following in increasing order of acidic strength:

- ClCH_2COOH , FCH_2COOH , CH_3COOH .
- $\text{CH}_3\text{CH}_2\text{CH}(\text{Br})\text{COOH}$, $\text{CH}_3\text{CH}(\text{Br})\text{CH}_2\text{COOH}$, $(\text{CH}_3)_2\text{CHCOOH}$, $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$.
- Benzoic Acid, 4-nitrobenzoic acid, 3,4-Dinitrobenzoic acid, 4-methoxybenzoic acid.

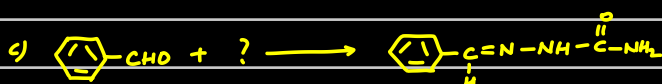
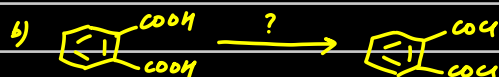
120. Although phenoxide ion has more number of resonating structures than carboxylate ion, still carboxylic acid is a stronger acid than phenol. Give reason.

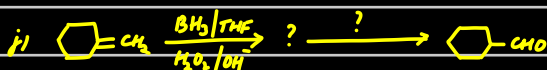
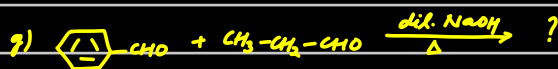
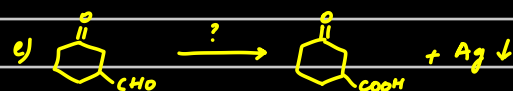
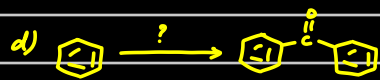
121. Give chemical test to distinguish between:

- Acetophenone & Benzophenone
- Phenol & Benzoic acid
- Benzoic acid & Ethyl benzoate
- Pentan-2-one & Pentan-3-one
- Ethanal & Propanal
- Propanal & Propanone

122. Explain: a) Acetylation b) Cannizzaro reaction c) Decarboxylation rxn d) Cross-Alcohol condensation rxn.

123. Compare each synthesis by giving missing species:

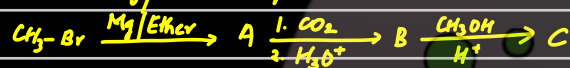




124. Arrange the following in decreasing order of their acidic strength. Give explanation for the arrangement:



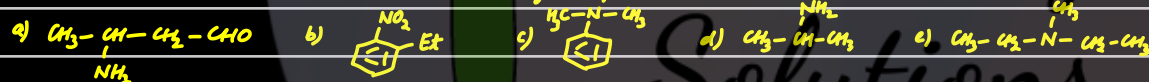
125. Identify the compounds A, B & C in the following reaction:



126. Complete the following reaction:



127. Write the IUPAC Name of the following compounds:



128. Write short note on the following:

a) Hoffmann Bromamide reaction

b) Gabriel phthalimide reaction

c) Hoffmann Ammonolysis

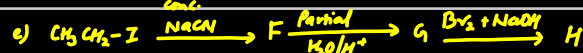
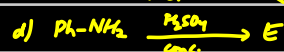
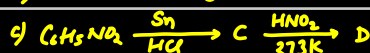
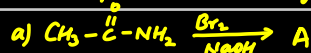
129. Arrange:

a) in decreasing order of pK_b values: CCN, CCN(C)C, CCN(C)C & CCN(C)C

b) in increasing order of basic strength: CCN, CCN(C)C, CCN(C)C & CCN(C)C

c) in increasing order of basic strength: CCN, CCN(C)C, CCN(C)C

130. Complete the following reaction:



131. Complete the reactions given below:

- $\text{Ph-N}_2^+\text{Cl}^- + \text{C}_2\text{H}_5\text{OH} \longrightarrow$
- $\text{Ph-N}_2^+\text{Cl}^- + \text{H}_3\text{PO}_2 + \text{H}_2\text{O} \longrightarrow$
- $\text{Ph-N}_2^+\text{Cl}^- + \text{KI} \longrightarrow$
- $\text{Ph-N}_2^+\text{Cl}^- + \text{Cu}_2\text{Cl}_2/\text{HCl} \longrightarrow$
- $\text{Ph-N}_2^+\text{Cl}^- + \text{H}_2\text{O} \xrightarrow{\text{H}^+}$

132. Carry out the following conversion:

- Aniline to 2,4,6-tribromofluorobenzene
- Nitrobenzene to Benzoic Acid
- Benzene to m-bromophenol
- Aniline to p-bromoaniline
- Benzamide to toluene
- Aniline to Benzylalcohol

133. Give one chemical test to distinguish the following pair of compounds:

- Methylamine & Dimethylamine
- Diethylamine & Trimethylamine
- Ethylamine & Aniline

134. Complete the following reactions:

- $\text{C}_6\text{H}_5\text{NH}_2 + \text{Br}_2 \xrightarrow{\text{H}_2\text{O}}$
- $\text{C}_6\text{H}_5\text{NH}_2 + \text{CH}_3\text{C}(=\text{O})\text{O}-\text{C}(=\text{O})\text{CH}_3 \longrightarrow$
- $\text{C}_6\text{H}_5\text{NH}_2 + \text{CH}_3\text{C}(=\text{O})\text{Cl} \longrightarrow$
- $\text{CH}_3\text{CH}_2\text{NH}_2 + \text{HNO}_2 \longrightarrow$



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135. Give reason:

- Aniline does not undergo Friedel-Craft reaction.
- $(\text{CH}_3)_2\text{NH}$ is more basic than $(\text{CH}_3)_3\text{N}$ in an aqueous solution.
- Primary amines have higher boiling point than tertiary amines.

136. How will you carry out the following conversion:

- Methanamine from ethanoic acid
- 1-Aminopentane from Hexanenitrile
- Ethanoic acid from Methanol

137. Explain the following:

- Aniline on nitration gives good amount of m-nitroaniline, though $-\text{NH}_2$ group is ortho & para directing in electrophilic substitution reaction.
- CH_3NH_2 is more basic than $\text{C}_6\text{H}_5\text{NH}_2$.

138. Arrange the following in the increasing order of boiling point:



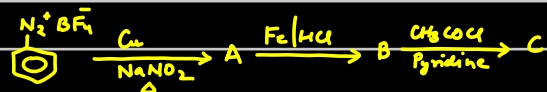
139. Explain the Coupling reaction of diazonium salt.

140. Write the reaction involved in Diazotisation.

141. Which of the following is more basic & why?



142. Complete the following reaction:



143. What happens when D-Glucose is treated with following reagent:

- a) HI b) HNO_3 c) Br_2 water d) HCN

144. What is Glycosidic linkage?

145. What is Glycogen? How is it different from starch?

146. What are the products of hydrolysis of Sucrose?

147. Classify amino acids as acidic, basic & neutral.

148. What are essential & non-essential amino acids? Give one example of each.

149. Differentiate between Fibrous & Globular protein.

150. Define: a) Peptide linkage b) Primary structure of protein c) Denaturation of protein.

151. What are common types of secondary structure of protein?

152. What are enzymes? Describe their function.

153. How are vitamins classified? Name the vitamin responsible for coagulation of blood.

154. Enumerate the reaction of D-Glucose which cannot be explained by open chain structure of glucose.

155. What are the different types of RNA found in the cell?

156. Why vitamin-C cannot be stored in our body?

157. What is the difference b/w a nucleotide & nucleoside?

158. Write the important structural & functional differences between DNA & RNA.

159. The two strands in DNA are complementary. Explain.