

Q101. When molten zinc is converted into solid state, it acquires HCP structures. The number of nearest neighbors will be

- A. 6
- B. 8
- C. 12
- D. 4

Q102. A mixture of acetone with chloroform show:

- A. Shows a positive deviation from Raoult's Law
- B. Behaves like a near ideal solution
- C. Follows Henry's Law
- D. Shows negative deviation from Raoult's Law

Q103. What would happen if the electrodes used in the electrolysis process are reactive:

- A. Electrode does not participate in the chemical reaction
- B. Electrodes only act as source and sink for electrons
- C. Electrodes participate in the electrode reaction
- D. Electrodes are burnt up

Q104. Hardy-Schulze rule explains the effect of electrolytes on the coagulation of colloidal solution. According to this rule, coagulation power of cations follow this order

- A. $Ba^{2+} > Na^{+} > Al^{3+}$
- B. $Al^{3+} > Na^{+} > Ba^{2+}$
- C. $Al^{3+} > Ba^{2+} > Na^{+}$
- D. $Ba^{2+} > Al^{3+} > Na^{+}$

Q105. The plot of concentration of the reactant vs. time for a reaction is a straight line with a negative slope. The reaction follows a

- A. zero order rate equation
- B. First order rate equation
- C. Second order rate equation
- D. Third order rate equation

Q106. _____ is used to make interpretations and predict which element will suit as the reducing agent for a given metal oxide:

- A. Enthalpy
- B. Entropy
- C. Gibb's Energy
- D. Specific Heat

Q107. The oxidation state of central atom in the anion of compound NaH_2PO_2 will be:

- A. +1
- B. +3
- C. +5
- D. -3

Q108. A transition metal exists in its highest oxidation state. It is expected to behave as:

- A. A chelating agent
- B. A central metal in a coordination compound
- C. An oxidizing agent
- D. A reducing agent

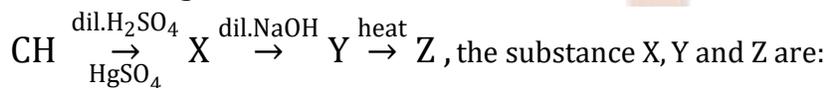
Q109. Benzene on reaction with chlorine in the presence of sunlight gives:

- A. Chloro benzene
- B. BHC
- C. DDT
- D. p-dichlorobenzene

Q110. The order of reactivity of HCl, HBr and HI with alcohol is

- A. HBr > HI > HCl B. HI > HBr > HCl
C. HCl > HI > HBr D. HCl = HBr = HI

Q111. In the given reaction, $\text{HC} \equiv \text{CH}$

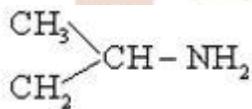


- A. X is Acetaldehyde, Y is β -Hydroxybutyraldehyde and Z is But-2-en-1-al
B. X is β -Hydroxybutyraldehyde, Y is But-2-en-1-al and Z is Acetaldehyde
C. X is Butan-1-ol, Y is Butanoic acid and Z is Acid
D. None of these

Q112.

An organic compound ($\text{C}_3\text{H}_9\text{N}$) (A) when treated with nitrous acid, gave an alcohol and N_2 gas was evolved. (A) on warming with CHCl_3 and caustic potash gave (C) which on reduction gave isopropylmethylamine. Predict the structure of (A):

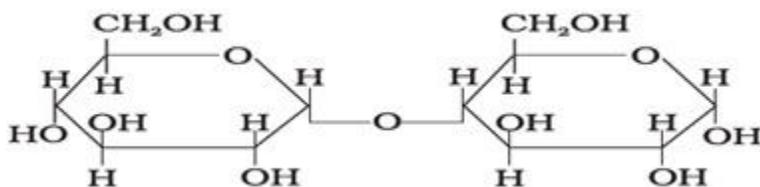
A.



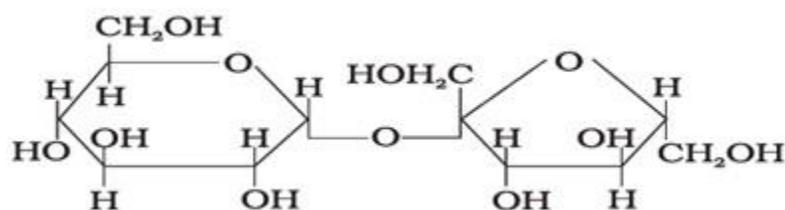
- B. $\text{CH}_3\text{CH}_2\text{-NH-CH}_3$
C. $\text{CH}_3\text{-N-CH}_3 | \text{CH}_3$
D. $\text{CH}_3\text{CH}_2\text{CH}_2\text{-NH}_3$

Q113. In disaccharides, if the reducing groups of monosaccharides i.e. aldehydic or ketonic groups are bonded, these are non-reducing sugars. Which of the following disaccharide is a non-reducing sugar?

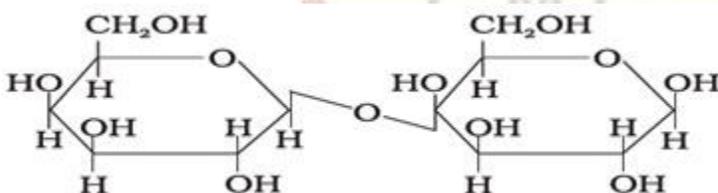
A.



B.



C.



D. None of these

Q114. The polymer used in the manufacture of orlon is

- A. PTFE B. PAN
C. PMMA D. PVC

Q115. The class of drugs used for treatment of stress is:

- A. Analgesics B. Antiseptics
C. Antihistamines D. Tranquillizers

Q116. Which of the following may be used as antipyretic as well as analgesic?

