



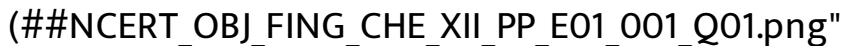
CHEMISTRY

BOOKS - MTG CHEMISTRY (ENGLISH)

PRACTICE PAPER -1

Mcqs

1. The unit cell with the given structure represents _____ crystal system.

(

width="80%">

A. cubic

B. orthorhombic

C. tetragonal

D. trigonal

Answer: A



Watch Video Solution

2. In electrorefining the impure metal is made

A. anode

B. cathode

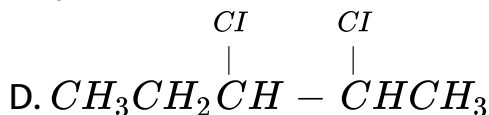
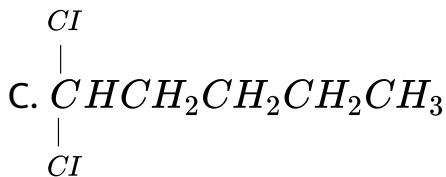
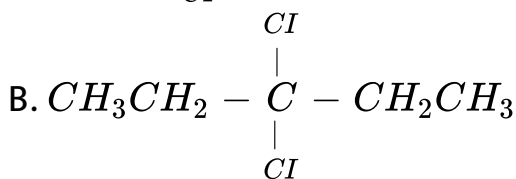
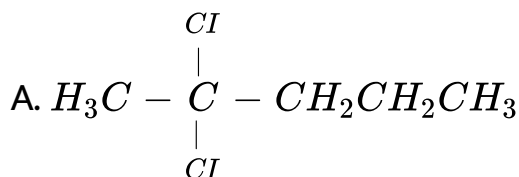
C. anode or cathode

D. electrolyte

Answer: A

 Watch Video Solution

3. A compound (A) $C_5H_{10}Cl_2$ on hydrolysis gives $C_5H_{10}O$ which reacts with NH_2OH , forms iodoform but does not give Fehling test (A) is :



Answer: A



Watch Video Solution

4. In hcp arrangement the coordination number is

A. 6

B. 12

C. 8

D. 10

Answer: B



Watch Video Solution

5. Which of the following statements is not true ?

A. Paramagnetic substances are weakly attracted by a magnetic field.

B. Ferromagnetic substances cannot be magnetised permanently .

C. The domains in antiferromagnetic substance are oppositely oriented with respect to each other.

D. Pairing of electrons cancels their magnetic moments in the diamagnetic substances.

Answer: B

 [Watch Video Solution](#)

6. Which of halogen acids indicated below is incorrect ?

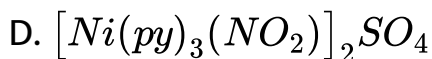
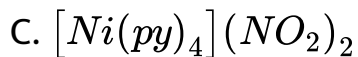
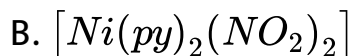
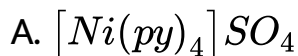
- A. $\text{HF} > \text{HCl} > \text{HBr} > \text{HI}$ (acidic strength)
- B. $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$ (reducing strength)
- C. $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$ (bond length)
- D. $\text{HF} > \text{HCl} > \text{HBr} > \text{HI}$ (thermal stability)

Answer: A



[Watch Video Solution](#)

7. Aqueous solution of nickel sulphate on treating with pyridine and then adding a solution of sodium nitrite gives dark blue crystals of



Answer: C



[View Text Solution](#)

8. m-Chlorobenzaldehyde on reaction with conc. KOH at room temperature gives:

A. Potassium m-chlorobenzoate and m-hydroxybenzaldehyde

B. m-hydroxybenzaldehyde and m-chlorobenzyl alcohol

C. m-chlorobenzyl alcohol and m-hydroxybenzylalcohol

D. Potassium m-chlorobenzote and m-chlorobenzyl alcohol.

Answer: D

 [Watch Video Solution](#)

9. Which of the following decreases on dilution of electrolyte solution ?

A. Equivalent conductance

B. Molar conductance

C. Specific conductance

D. Conductance

Answer: C



Watch Video Solution

10. Germanium is an example of

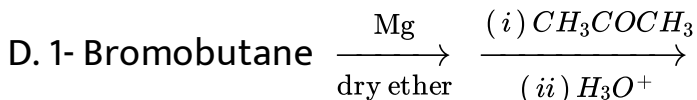
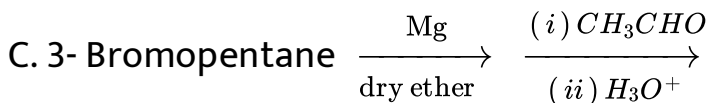
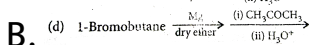
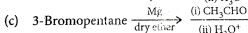
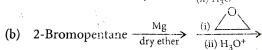
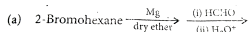
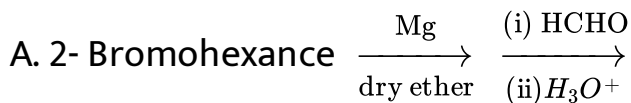
- A. intrinsidc semiconductor
- B. n-type semiconductor
- C. p-type semiconductor
- D. insulator.

Answer: A



Watch Video Solution

11. Which of the following synthesis gives 3-methyl -1-hexanol ?



Answer: B

 [View Text Solution](#)

12. Non-reducing sugar is

A. maltose

B. sucrose

C. lactose

D. none of these.

Answer: B



Watch Video Solution

13. The electrode potential of oxidation half cell

A. a. is independent of the concentration of ions in the
cell

B. b. decrease with decreased concentration of ions in
the cell

C. c. decreases with increased concentration of ions in
the cell

D. d. none of these.

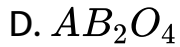
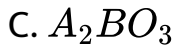
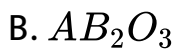
Answer: B

 [Watch Video Solution](#)

14. In a cubic closed packed structure of mixed oxides the lattice is made up of oxide ions, one eighth of tetrahedral voids are occupied by divalent ions (A^{2+}) while one half of the octahedral voids occupied trivalent ions (B^{3+}).

What is the formula of the oxide ?

A. A_2BO_4



Answer: D

 [Watch Video Solution](#)

15. Which of the following is not an actinide ?

A. Uranium

B. Curium

C. Californium

D. Erbium

Answer: D



Watch Video Solution

16. Copper is extracted from copper pyrites ore by heating in a blast furnace. The method is based on the principal that

A. copper has more affinity for oxygen than sulphur at high temperature.

B. iron has more affinity for oxygen than copper at high temperature.

C. sulphur has less affinity for oxygen at high temperature

D. copper has less affinity for oxygen than sulphur at high temperature.

Answer: B



Watch Video Solution

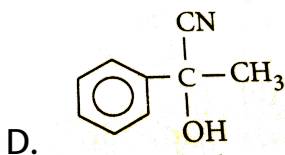
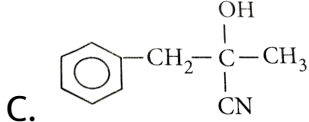
17. Alcohols can be converted to various types of gasoline (petrol) by shape-selective catalysts

A. Maltase

B. ZSM-5

C. Lindlar's catalyst

D. Ziegler Natta catalyst



Answer: A

 [Watch Video Solution](#)

19. The element with atomic number 33 belongs to

A. group 13

B. group 14

C. group 15

D. group 16

Answer: C

 [Watch Video Solution](#)

20. For H_3PO_3 and H_3PO_4 the correct choice is

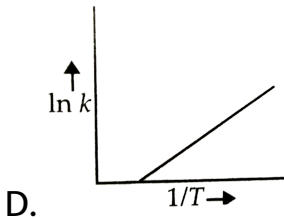
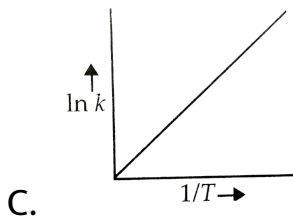
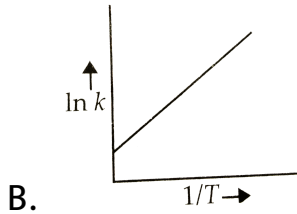
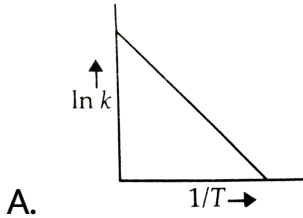
- A. H_3PO_3 is dibasic and reducing
- B. H_3PO_3 is dibasic and non-reducing
- C. H_3PO_4 is tribasic and reducing
- D. H_3PO_3 is tribasic and non-reducing.

Answer: A

 [Watch Video Solution](#)

21. According to Arrhenius equation rate constant k is equal to $Ae^{-E_a/RT}$. Which of the following option.

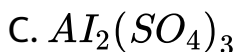
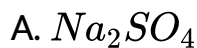
Represents the graph of $\ln k$ us $\frac{1}{T}$?



Answer: A

 [Watch Video Solution](#)

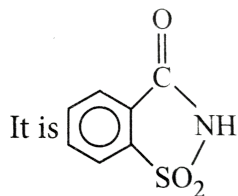
22. Among the electrolytes Na_2SO_4 , $CaCl_2$, $Al_2(SO_4)_3$ and NH_4Cl the most effective coagulating agent for Sb_2S_3 sol is



Answer: C

 [Watch Video Solution](#)

23. Which is correct about saccharin ?



A.

B. It is 600 times sweeter than sugar.

C. It is used as sweetening agent.

D. All of these

Answer: A:C

 [Watch Video Solution](#)

24. In which mode of expression the concentration of solution remains independent of temperature ??

A. a. Normality

B. b. Formality

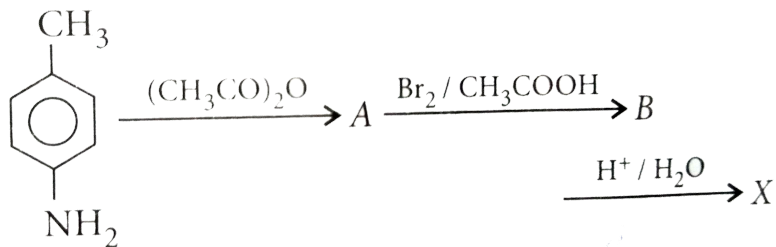
C. c. Mole fraction

D. d. Molarity

Answer: C

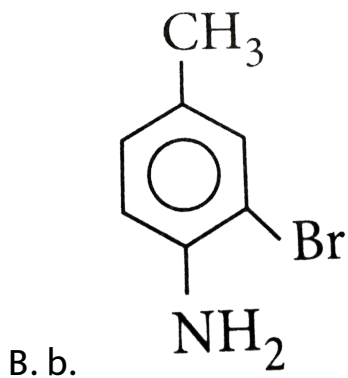
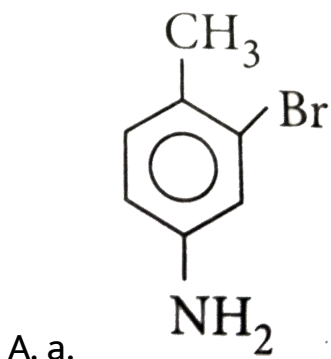


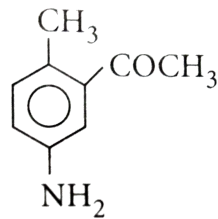
View Text Solution



25. What is X ?

What is X ?





C. c.

D. 

Answer: B

 [Watch Video Solution](#)

26. The order of reactivities of the following alkyl halides for a S_N2 reaction is :

A. a. $RF > RCl > RBr > RI$

B. b. $RF > RBr > RCl > RI$

C. c. $RCl > RBr > RF > RI$

D. d. RI > RBr > RCl > RF

Answer: D



[View Text Solution](#)

27. Gabriel phthalimide reaction is used for the preparation of _____ amines

A. a. primary aromatic

B. b. secondary

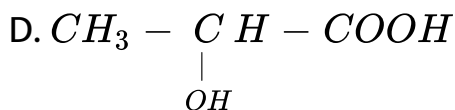
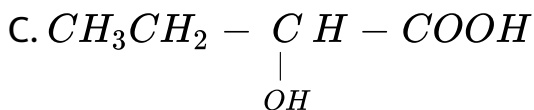
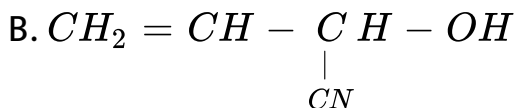
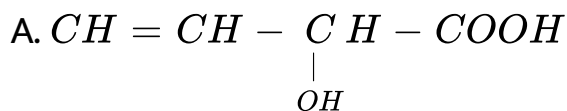
C. c. primary aliphatic

D. d. tertiary

Answer: C



the structure of compound B is



Answer: A

29. Drugs which bind strongly to the active site of an enzyme and do not depend upon concentration of natural substrate are called as

- A. competitive inhibitors
- B. non-competitive inhibitors
- C. β -blockers.
- D. α -blockers.

Answer: B



[Watch Video Solution](#)

30. Tincture of iodine is

- A. aqueous solution of I_2
- B. alcoholic solution of I_2
- C. solution of I_2 in aqueous KI
- D. aqueous solution of KI

Answer: B



Watch Video Solution

31. Which of the following cannot show linkage isomerism?



D. NH_3

Answer: D

 [Watch Video Solution](#)

32. The oxidation of central atom in the complex

$[Co(NH_3)_4ClNO_2]$ is

A. +2

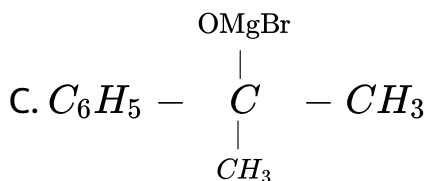
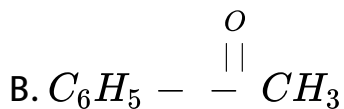
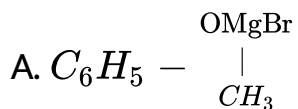
B. +3

C. +1

D. zero

Answer: A

33. Which of the following are intermediates in the reaction of excess of CH_3MgBr with $C_6H_5COOC_2H_5$ to make 2-phenyl-2-propanol ?



A. A and B

B. A,B and C

C. A and C

D. B and C

Answer: B



Watch Video Solution

34. Acetic acid is obtained when

- A. Methyl alcohol is oxidised with potassium permanganate
- B. Calcium acetate is distilled in the presence of calcium formate
- C. acetaldehyde is oxidised with potassium dichromate and sulphuric acid
- D. glycerol is heated with sulphuric acid.

Answer: C



Watch Video Solution

35. In α -helix , structure, polypeptide chains are folded in

a

A. right hand side

B. left hand side

C. both way

D. none of these.

Answer: A



Watch Video Solution

36. The electrode potential is the tendency of metal

- A. to gain electrons
- B. to lose electrons
- C. to either lose or gain electrons
- D. none of these.

Answer: C

 [Watch Video Solution](#)

37. Transition elements exhibit higher enthalpies of atomization because

- A. of large number of unpaired electrons

B. of having stronger interatomic interaction

C. of strong bonding between atoms

D. All of these

Answer: D

 [Watch Video Solution](#)

38. Which of the following is a monomer of natural rubber ?

A. Chloroprene

B. Caprolactam

C. Urea

D. none of these.

Answer: D



[View Text Solution](#)

39. The compound which reacts fastest with Lucas reagent at room temperature is

A. butan-1-ol

B. butan -2-ol

C. 2-methylpropan-1-ol

D. 2-methylpropan -2-ol

Answer: D



[View Text Solution](#)

40. Bakelite is obtained from phenol by reaction with

A. HCHO

B. $(CH_2OH)_2$

C. CH_3CHO

D. CH_3COCH_3

Answer: A

 [Watch Video Solution](#)

41. Which one of the following on oxidation gives a ketone ?

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. All of these

Answer: B



Watch Video Solution

42. An ether is more volatile than alcohol having the same molecular formula. This is due to

A. intermolecular hydrogen bonding in ethers

B. dipolar character of ethers

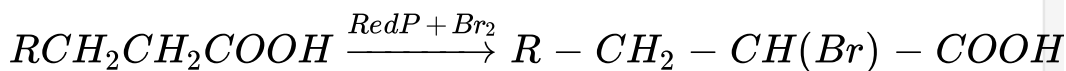
C. alcohols having resonance structures

D. intermolecular hydrogen bonding in alcohols.

Answer: D

 Watch Video Solution

43. The reaction



- A. Reimer- Tiemann reaction
- B. Hell-Volhard - Zelinsky reaction
- C. Cannizzaro reaction
- D. Sandmeyer reaction .

Answer: B

 Watch Video Solution

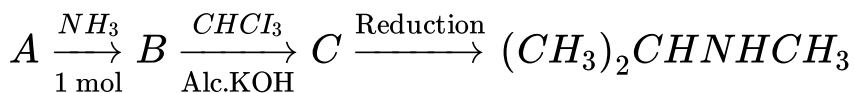
44. Which of the following is used for inducing sleep ?

- A. Paracetamol
- B. Chloroquine
- C. Bithional
- D. Barbituric acid derivatives

Answer: D

 Watch Video Solution

45. Identify A in the following sequence of reactions



- A. Ethyl halide

B. Iso-propylamine

C. n-propyl halide

D. Iso- propyl halide

Answer: D



[View Text Solution](#)

46. IN the reaction, $2NO + Cl_2 \rightarrow 2NOCl$ it has been found that doubling the concentration of both the reactants increases the rate by a factor of eight but doubling the chlorine concentration alone only doubles the rate. Which of the following statements is incorrect ?

A. The reaction is first order in Cl_2

B. The reaction is second order in NO.

C. The overall order of reaction is 2.

D. The overall order of reaction is 3.

Answer: D



Watch Video Solution

47. Which one of the following ions is coloured ?

A. Sc^{3+}

B. Ti^{4+}

C. Zn^{2+}

D. V^{2+}

Answer: D



Watch Video Solution

48. which of the following statements about lanthanides is incorrect ?

- A. All lanthanides are highly dense metals.
- B. More characteristic oxidation state of lanthanides is +3.
- C. Lanthanides are separated from one another by ion exchange method.
- D. Ionic radii of trivalent lanthanides steadily increase with increase in atomic number.

Answer: D

 Watch Video Solution

49. Match the column I with column II and mark the appropriate choice.

Column I		Column II	
(A)	Aniline	(i)	Can be made by Gabriel phthalimide reaction
(B)	<i>N</i> -Methylaniline	(ii)	Undergoes electrophilic substitution reaction with HNO_2
(C)	<i>N,N</i> -Dimethylaniline	(iii)	Forms yellow oily product with HNO_2
(D)	Benzylamine	(iv)	Gives azo dye test

A. $A \rightarrow iv, B \rightarrow iii, C \rightarrow ii, D \rightarrow i$

B. $A \rightarrow ii, B \rightarrow iv, C \rightarrow I, D \rightarrow iii$

C. $A \rightarrow iii, B \rightarrow I, C \rightarrow iv, D \rightarrow ii$

D. $A \rightarrow I, B \rightarrow ii, C \rightarrow iii, D \rightarrow iv$

Answer: A



Watch Video Solution

50. Which is a characteristic of a catalyst ?

A. It changes the equilibrium point

B. It initiates the reaction

C. It alters the rate of reaction

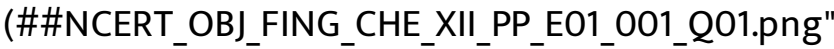
D. It increases the average kinetic energy of the molecule.

Answer: C

 [Watch Video Solution](#)

Practice Paper 1

1. The unit cell with the given structure represents _____ crystal system.

 (##NCERT_OBJ_FING_CHE_XII_PP_E01_001_Q01.png" width="80%")>

A. cubic

B. orthorhombic

C. tetragonal

D. trigonal

Answer: A



Watch Video Solution

2. In electrorefining the impure metal is made

A. anode

B. cathode

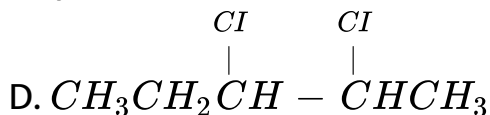
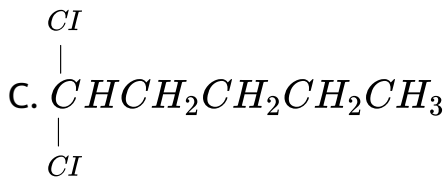
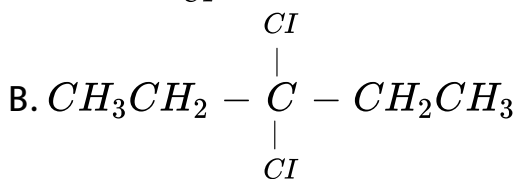
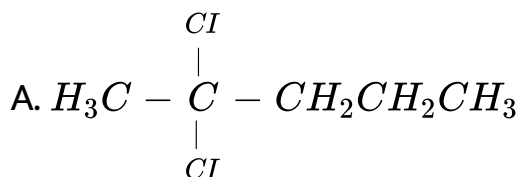
C. anode or cathode

D. electrolyte

Answer: A

 Watch Video Solution

3. A compound (A) $C_5H_{10}Cl_2$ on hydrolysis gives $C_5H_{10}O$ which reacts with NH_2OH , forms iodoform but does not give Fehling test (A) is :



Answer: A



Watch Video Solution

4. In hcp arrangement the coordination number is

A. 6

B. 12

C. 8

D. 10

Answer: B



Watch Video Solution

5. Which of the following statements is not true ?

A. Paramagnetic substances are weakly attracted by a magnetic field.

B. Ferromagnetic substances cannot be magnetised permanently .

C. The domains in antiferromagnetic substance are oppositely oriented with respect to each other.

D. Pairing of electrons cancels their magnetic moments in the diamagnetic substances.

Answer: B



[Watch Video Solution](#)

6. Which of halogen acids indicated below is incorrect ?

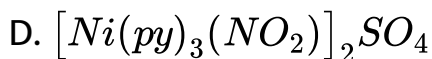
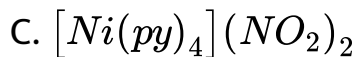
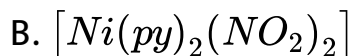
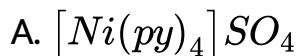
- A. $\text{HF} > \text{HCl} > \text{HBr} > \text{HI}$ (acidic strength)
- B. $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$ (reducing strength)
- C. $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$ (bond length)
- D. $\text{HF} > \text{HCl} > \text{HBr} > \text{HI}$ (thermal stability)

Answer: A



[Watch Video Solution](#)

7. Aqueous solution of nickel sulphate on treating with pyridine and then adding a solution of sodium nitrite gives dark blue crystals of



Answer: C



View Text Solution

8. m-Chlorobenzaldehyde on reaction with conc. KOH at room temperature gives:

A. Potassium m-chlorobenzoate and m-hydroxybenzaldehyde

B. m-hydroxybenzaldehyde and m-chlorobenzyl alcohol

C. m -chlorobenzyl alcohol and m-hydroxybenzylalcohol

D. Potassium m-chlorobenzote and m-chlorobenzyl alcohol.

Answer: D

 [Watch Video Solution](#)

9. Which of the following decreases on dilution of electrolyte solution ?

A. Equivalent conductance

B. Molar conductance

C. Specific conductance

D. Conductance

Answer: C



Watch Video Solution

10. Germanium is an example of

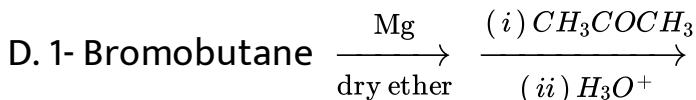
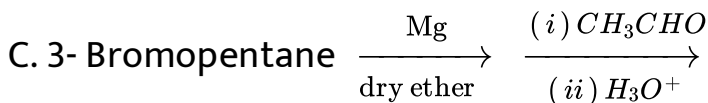
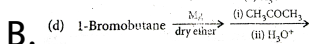
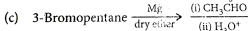
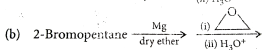
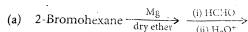
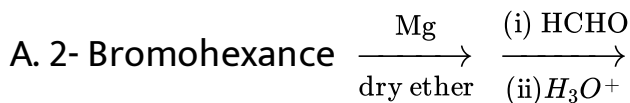
- A. intrinsidc semiconductor
- B. n-type semiconductor
- C. p-type semiconductor
- D. insulator.

Answer: A



Watch Video Solution

11. Which of the following synthesis gives 3-methyl -1-hexanol ?



Answer: B



View Text Solution

12. Non-reducing sugar is

A. maltose

B. sucrose

C. lactose

D. none of these.

Answer: B



Watch Video Solution

13. The electrode potential of oxidation half cell

A. a. is independent of the concentration of ions in the
cell

B. b. decrease with decreased concentration of ions in
the cell

C. c. decreases with increased concentration of ions in the cell

D. d. none of these.

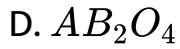
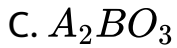
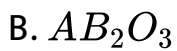
Answer: B

 [Watch Video Solution](#)

14. In a cubic closed packed structure of mixed oxides the lattice is made up of oxide ions, one eighth of tetrahedral voids are occupied by divalent ions (A^{2+}) while one half of the octahedral voids occupied trivalent ions (B^{3+}).

What is the formula of the oxide ?

A. A_2BO_4



Answer: D

 [Watch Video Solution](#)

15. Which of the following is not an actinide ?

A. Uranium

B. Curium

C. Californium

D. Erbium

Answer: D



Watch Video Solution

16. Copper is extracted from copper pyrites ore by heating in a blast furnace. The method is based on the principal that

A. copper has more affinity for oxygen than sulphur at high temperature.

B. iron has more affinity for oxygen than copper at high temperature.

C. sulphur has less affinity for oxygen at high temperature

D. copper has less affinity for oxygen than sulphur at high temperature.

Answer: B



Watch Video Solution

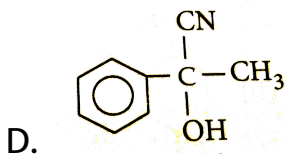
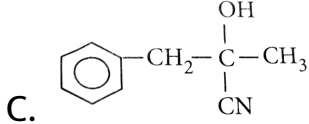
17. Alcohols can be converted to various types of gasoline (petrol) by shape-selective catalysts

A. Maltase

B. ZSM-5

C. Lindlar's catalyst

D. Ziegler Natta catalyst



Answer: A

 [Watch Video Solution](#)

19. The element with atomic number 33 belongs to

A. group 13

B. group 14

C. group 15

D. group 16

Answer: C

 [Watch Video Solution](#)

20. For H_3PO_3 and H_3PO_4 the correct choice is

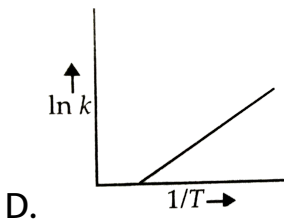
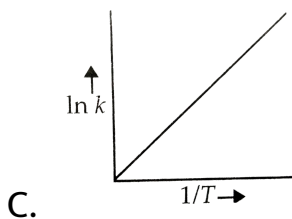
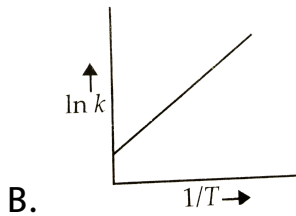
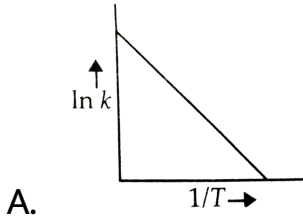
- A. H_3PO_3 is dibasic and reducing
- B. H_3PO_3 is dibasic and non-reducing
- C. H_3PO_4 is tribasic and reducing
- D. H_3PO_3 is tribasic and non-reducing.

Answer: A

 [Watch Video Solution](#)

21. According to Arrhenius equation rate constant k is equal to $Ae^{-E_a/RT}$. Which of the following option.

Represents the graph of $\ln k$ us $\frac{1}{T}$?

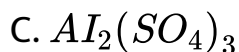
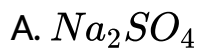


Answer: A



Watch Video Solution

22. Among the electrolytes Na_2SO_4 , $CaCl_2$, $Al_2(SO_4)_3$ and NH_4Cl the most effective coagulating agent for Sb_2S_3 sol is

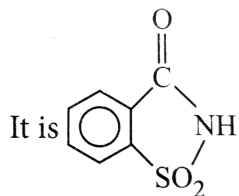


Answer: C



Watch Video Solution

23. Which is correct about saccharin ?



A.

B. It is 600 times sweeter than sugar.

C. It is used as sweetening agent.

D. All of these

Answer: A:C



Watch Video Solution

24. In which mode of expression the concentration of solution remains independent of temperature ??

A. a. Normality

B. b. Formality

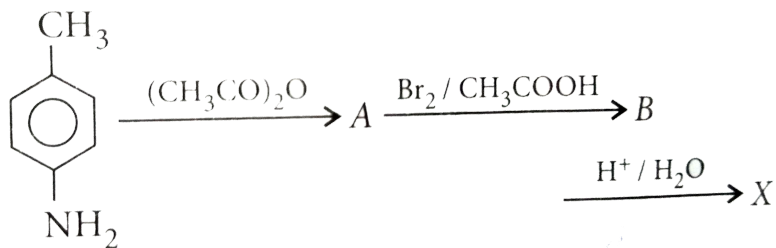
C. c. Mole fraction

D. d. Molarity

Answer: C

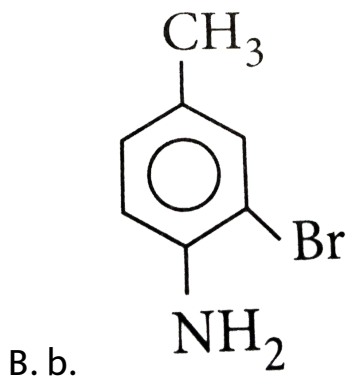
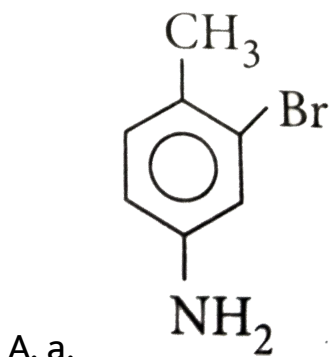


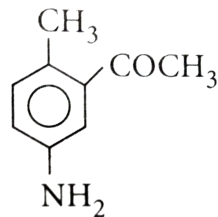
View Text Solution



25. What is X ?

What is X ?





C. c.

D. 

Answer: B

 **Watch Video Solution**

26. The order of reactivities of the following alkyl halides for a S_N2 reaction is :

A. a. $RF > RCl > RBr > RI$

B. b. $RF > RBr > RCl > RI$

C. c. $RCl > RBr > RF > RI$

D. d. RI > RBr > RCl > RF

Answer: D

 [View Text Solution](#)

27. Gabriel phthalimide reaction is used for the preparation of _____ amines

A. a. primary aromatic

B. b. secondary

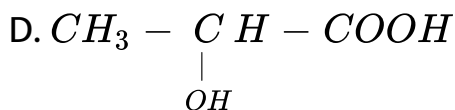
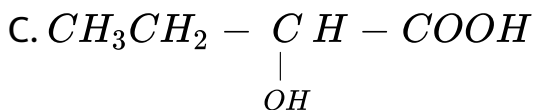
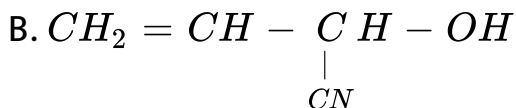
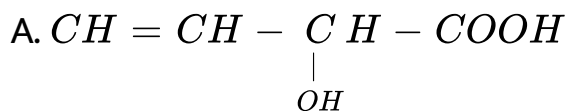
C. c. primary aliphatic

D. d. tertiary

Answer: C



the structure of compound B is



Answer: A

29. Drugs which bind strongly to the active site of an enzyme and do not depend upon concentration of natural substrate are called as

- A. competitive inhibitors
- B. non-competitive inhibitors
- C. β -blockers.
- D. α -blockers.

Answer: B



[Watch Video Solution](#)

30. Tincture of iodine is

- A. aqueous solution of I_2
- B. alcoholic solution of I_2
- C. solution of I_2 in aqueous KI
- D. aqueous solution of KI

Answer: B



Watch Video Solution

31. Which of the following cannot show linkage isomerism?



D. NH_3

Answer: D

 [Watch Video Solution](#)

32. The oxidation of central atom in the complex

$[Co(NH_3)_4ClNO_2]$ is

A. +2

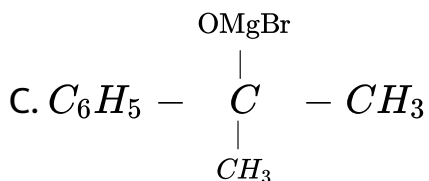
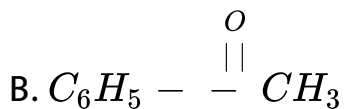
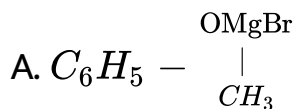
B. +3

C. +1

D. zero

Answer: A

33. Which of the following are intermediates in the reaction of excess of CH_3MgBr with $C_6H_5COOC_2H_5$ to make 2-phenyl-2-propanol ?



A. A and B

B. A,B and C

C. A and C

D. B and C

Answer: B



Watch Video Solution

34. Acetic acid is obtained when

- A. Methyl alcohol is oxidised with potassium permanganate
- B. Calcium acetate is distilled in the presence of calcium formate
- C. acetaldehyde is oxidised with potassium dichromate and sulphuric acid
- D. glycerol is heated with sulphuric acid.

Answer: C

 [Watch Video Solution](#)

35. In α -helix , structure, polypeptide chains are folded in

a

A. right hand side

B. left hand side

C. both way

D. none of these.

Answer: A

 [Watch Video Solution](#)

36. The electrode potential is the tendency of metal

- A. to gain electrons
- B. to lose electrons
- C. to either lose or gain electrons
- D. none of these.

Answer: C

 [Watch Video Solution](#)

37. Transition elements exhibit higher enthalpies of atomization because

- A. of large number of unpaired electrons

B. of having stronger interatomic interaction

C. of strong bonding between atoms

D. All of these

Answer: D



Watch Video Solution

38. Which of the following is a monomer of natural rubber ?

A. Chloroprene

B. Caprolactam

C. Urea

D. none of these.

Answer: D

 [View Text Solution](#)

39. The compound which reacts fastest with Lucas reagent at room temperature is

- A. butan-1-ol
- B. butan -2-ol
- C. 2-methylpropan-1-ol
- D. 2-methylpropan -2-ol

Answer: D

 [View Text Solution](#)

40. Bakelite is obtained from phenol by reaction with

A. HCHO

B. $(CH_2OH)_2$

C. CH_3CHO

D. CH_3COCH_3

Answer: A

 [Watch Video Solution](#)

41. Which one of the following on oxidation gives a ketone ?

A. Primary alcohol

B. Secondary alcohol

C. Tertiary alcohol

D. All of these

Answer: B



Watch Video Solution

42. An ether is more volatile than alcohol having the same molecular formula. This is due to

A. intermolecular hydrogen bonding in ethers

B. dipolar character of ethers

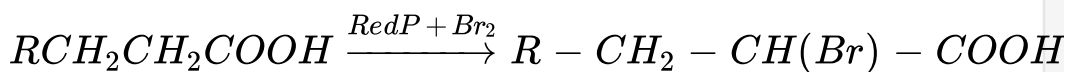
C. alcohols having resonance structures

D. intermolecular hydrogen bonding in alcohols.

Answer: D

 Watch Video Solution

43. The reaction



- A. Reimer- Tiemann reaction
- B. Hell-Volhard - Zelinsky reaction
- C. Cannizzaro reaction
- D. Sandmeyer reaction .

Answer: B

 Watch Video Solution

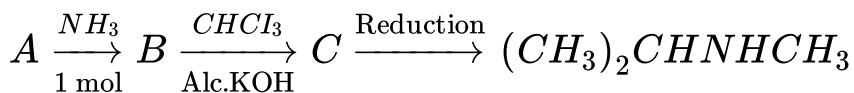
44. Which of the following is used for inducing sleep ?

- A. Paracetamol
- B. Chloroquine
- C. Bithional
- D. Barbituric acid derivatives

Answer: D

 [Watch Video Solution](#)

45. Identify A in the following sequence of reactions



- A. Ethyl halide

B. Iso-propylamine

C. n-propyl halide

D. Iso- propyl halide

Answer: D



[View Text Solution](#)

46. IN the reaction, $2NO + Cl_2 \rightarrow 2NOCl$ it has been found that doubling the concentration of both the reactants increases the rate by a factor of eight but doubling the chlorine concentration alone only doubles the rate. Which of the following statements is incorrect ?

A. The reaction is first order in Cl_2

B. The reaction is second order in NO.

C. The overall order of reaction is 2.

D. The overall order of reaction is 3.

Answer: D

 [Watch Video Solution](#)

47. Which one of the following ions is coloured ?

A. Sc^{3+}

B. Ti^{4+}

C. Zn^{2+}

D. V^{2+}

Answer: D



Watch Video Solution

48. which of the following statements about lanthanides is incorrect ?

- A. All lanthanides are highly dense metals.
- B. More characteristic oxidation state of lanthanides is +3.
- C. Lanthanides are separated from one another by ion exchange method.
- D. Ionic radii of trivalent lanthanides steadily increase with increase in atomic number.

Answer: D

 Watch Video Solution

49. Match the column I with column II and mark the appropriate choice.

Column I		Column II	
(A)	Aniline	(i)	Can be made by Gabriel phthalimide reaction
(B)	<i>N</i> -Methylaniline	(ii)	Undergoes electrophilic substitution reaction with HNO_2
(C)	<i>N,N</i> -Dimethylaniline	(iii)	Forms yellow oily product with HNO_2
(D)	Benzylamine	(iv)	Gives azo dye test

A. $A \rightarrow iv, B \rightarrow iii, C \rightarrow ii, D \rightarrow i$

B. $A \rightarrow ii, B \rightarrow iv, C \rightarrow I, D \rightarrow iii$

C. $A \rightarrow iii, B \rightarrow I, C \rightarrow iv, D \rightarrow ii$

D. $A \rightarrow I, B \rightarrow ii, C \rightarrow iii, D \rightarrow iv$

Answer: A



Watch Video Solution

50. Which is a characteristic of a catalyst ?

A. It changes the equilibrium point

B. It initiates the reaction

C. It alters the rate of reaction

D. It increases the average kinetic energy of the molecule.

Answer: C



Watch Video Solution