



CHEMISTRY

BOOKS - NTA MOCK TESTS

NEET MOCK TEST 17

Chemistry

1. Dehydration of cyclopentyl carbinol with conc. H_2SO_4 forms

- A. Cyclopentene
- B. Cyclohexene
- C. Cyclohexane
- D. none of these

Answer: D



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2. Hydrogen is :

- A. electropositive
- B. electronegative
- C. both electropositive as well as electronegative
- D. neither electropositive nor electronegative

Answer: C



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3. The total volume of dry gaseous products at STP, when 3 moles of electrons are transferred from anode to cathode in the electrolysis of water is :

(Volume of gas a STP =22.4L)

- A. 67.2L

B. 50.4L

C. 44.8L

D. 56.0L

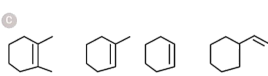
Answer: B

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4. Which of the following is incorrect order ?

A. $CH_3^- > CH_3O^- > HO^- > H_2O$ (Nucleophilicity in protic solvent)

B. $Cl^- > CH_3COO^- > CH_3O^- > NH_2^-$ (Leaving group ability)

C. 
Stability of alkane

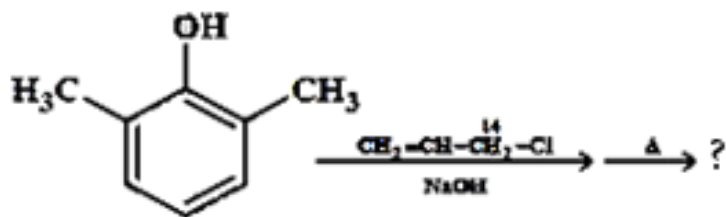
D.

$CH_3 - CH_2 - F > CH_3 - CH_2 - Cl > CH_3 - CH_2 - Br > CH_3$

(Boiling point)

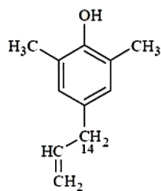
Answer: D

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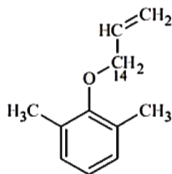


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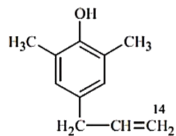
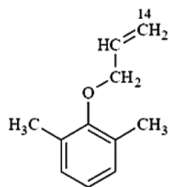
What is the missing product ?



A.



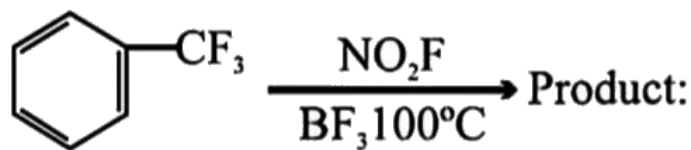
B.



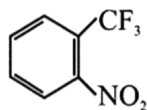
Answer: A

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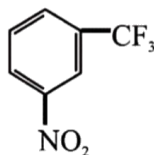
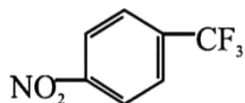
6. Complete the following reaction



Product -



A.



D. Both 'A' and 'B'

Answer: C

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7. Which one is incorrect statement ?

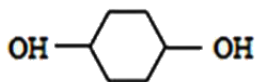
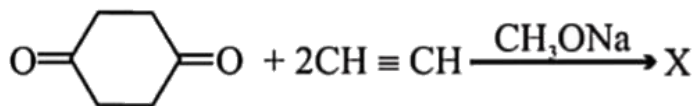
- A. He is used in gas cooled nuclear reactors
- B. He is used as a cryogenic agent for carrying out experiments at low temperature
- C. He is used to produce and sustain powerful super conducting magnet is

D. He is used to fill gas balloons instead of H_2 because it is lighter than H_2 and non-inflammable

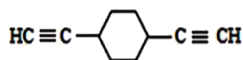
Answer: D

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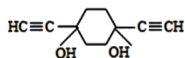
8. Identify the product in the following reactions :



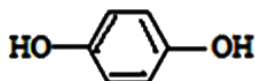
A.



B.



C.



D.

Answer: C

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9. Dissociation of phosphorus pentachloride is favoured by -

- A. High temperature and high pressure
- B. High temperature and low pressure
- C. low temperature and low pressure
- D. Low temperature and high pressure

Answer: B

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10. 2,2-dichloro propane on hydrolysis yields

- A. Acetone

B. 2,2-Propane diol

C. Isopropyl alcohol

D. Acetaldehyde

Answer: A

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11. E° of $Fe^{2+}/Fe = -0.44V$, E° of $Cu/Cu^{2+} = -0.34V$.

Then in the cell

A. Cu^{2+} Oxidizes Fe

B. Fe^{2+} oxidizes Cu

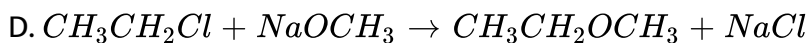
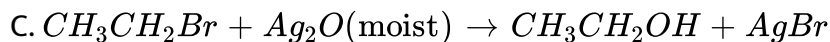
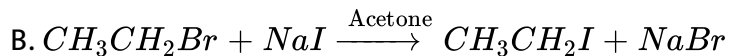
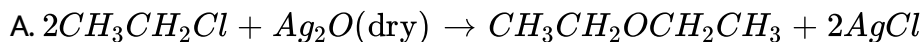
C. Cu Reduces Fe^{2+}

D. Fe reduces Cu^{2+}

Answer: D

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12. Finkelstein reaction -



Answer: B

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13. Two solutions of a substance (non-electrolyte) are mixed in the following manner , 480 mL of 1.5 M [first solution] + 520 mL of 1.2 M [second solution] . What is the molarity of the final mixture ?

A. 1.50 M

B. 1.20M

C. 2.70M

D. 1.344M

Answer: D



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14. the stability of lyophilic colloids is due to

A. charge on their particles

B. large size of their particles

C. small size of their particles

D. solvation by dispersion medium .

Answer: D



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15. Boron has an exceptionally high melting point in the group 13th elements, because -

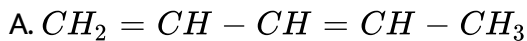
- A. boron has the smallest size in the group
- B. boron atoms are joined by Vander Waals force
- C. boron is covalent solid
- D. boron has higher ionisation energy

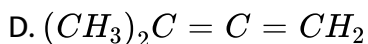
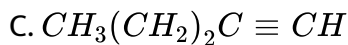
Answer: C



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16. A compound (C_5H_8) reacts with ammoniacal $AgNO_3$ to give a white precipitate and reacts with excess of $KMnO_4$ solution to give $(CH_3)_2CH - COOH$. The compound is





Answer: B

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17. Three lines are drawn from a single corner of an FCC unit cell to meet the other corner such that they are found to pass through exactly-1-Octahedral void only, no voids Octahedral void only. Identify the line in the same order -

A. Edge, Face diagonal, Body diagonal

B. Face diagonal, Edge Body diagonal

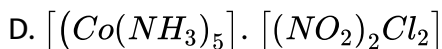
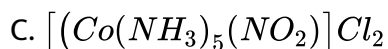
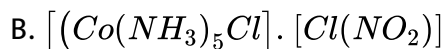
C. Body diagonal, Face diagonal Edge

D. Edge, Body diagonal, Face diagonal

Answer: A

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18. A coordination compound of cobalt has the molecular formula containing five ammonia molecules, one nitro group and two chlorine atoms for one cobalt atom. One mole of this compound gives three ions in an aqueous solution. On reacting this solution with excess of $AgNO_3$ solution, we get two moles of $AgCl$ precipitate. The ionic formula for this complex would be



Answer: C



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19. Fixed volume of 0.1M benzoic acid solution is added into 0.2 M sodium benzoate solution and formed a 300 ml, resultant acidic buffer solution. If pH of this buffer solution is 4.5 then find added volume of benzoic acid -
(Given : pK_a benzoic acid =4.2)

- A. 100ml
- B. 150 ml
- C. 200 ml
- D. None of these

Answer: B

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20. The reaction , $2RCHO \xrightarrow{\text{Al-ethoxide}} RCOOCH_2R$ is called -

- A. Tischenko reaction
- B. Knoevangel reacion

C. Cannizzaro reaction

D. HVZ reaction

Answer: A



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21. Match List I with List II

	List-I		List-II
(a)	Cyanide process	(1)	Ultrapure Ge
(b)	Floatation process	(2)	Pine oil
(c)	Electrolytic reduction	(3)	Extraction of Al
(d)	Zone refining	(4)	Extraction of Au

A. a-3,b-1,c-4,d-2

B. a-4,b-2,c-3,d-1

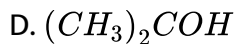
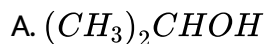
C. a-3,b-2,c-4,d-1

D. a-4,b-1,c-3,d-2

Answer: B

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22. The structural formula of isopropyl carbinol is-



Answer: C

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23. The furnace which gives the highest temperature is

A. blast furnace

B. reverberatory furnace

C. electrical furnace

D. muffle furnace

Answer: C

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24. If $\Delta_0 < P$, the correct electronic configuration for d^4 system will be -

A. $t_{2g}^4 e_g^0$

B. $t_{2g}^3 e_g^1$

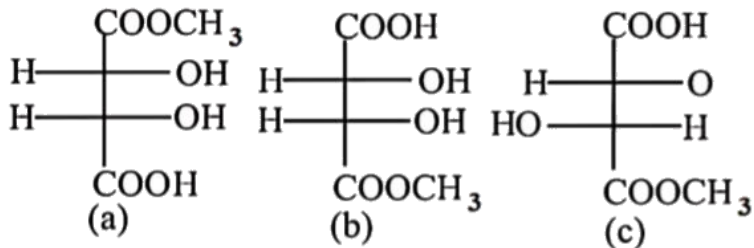
C. $t_{2g}^0 t_g^4$

D. $t_{2g}^2 e_g^2$

Answer: B

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25. The correct statements about the compounds a,b and c is / are -



- A. a and b are identical
- B. a and b are diastereomers
- C. a and c are enantiomers
- D. a and b are enantiomers

Answer: D

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26. Among the complex ions given below which is/are outer-orbitals complex-I- $[\text{Co}(\text{CN})_6]^{4-}$ II- $[\text{Fe}(\text{H}_2\text{O})_6]^{2+}$ III- $[\text{FeF}_6]^{3-}$ IV- $[\text{CoF}_6]^{3-}$

A. II,III,IV

B. II,III only

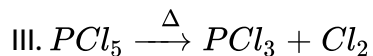
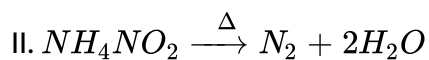
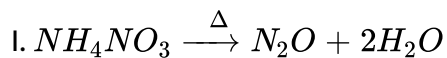
C. I,IV only

D. II only

Answer: A

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27. Out of the following redox reactions



disproportionation is not shown in

A. I and II

B. II and III

C. I and III

D. I, II and III

Answer: D

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28. Which of the following will not form when $NaHCO_3$ solution is added to aqueous $FeCl_3$ solution ?

A. CO_2

B. $Fe(OH)_3$

C. $Fe(HCO_3)_3$

D. $NaCl$

Answer: C

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29. The IUPAC name $C_6H_5 - \underset{\substack{| \\ C_6H_5}}{C} H - CH_2 - CCl_3$ is

A. 1,1,1-trichloro -3,3- diphenyl propane

B. 1,1-diphenyl -3,3,3-trichloropropane

C. Both A and B

D. None of these

Answer: A



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30. Minamata disease is due to pollution of

A. Organic waste into drinking water

B. Oil spill in water

C. Industrial waste mercury into fishing water

D. Arsenic into the atmosphere

Answer: C



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31. XeF_6 on complete hydrolysis gives



D. none of these

Answer: C



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32. Benzyl alcohol and sodium benzoate is obtained by the action of sodium hydroxide on benzaldehyde. This reaction is known as

- A. Perkin's reaction
- B. Cannizzaro's reaction
- C. Sandmeyer's reaction
- D. Claisen condensation

Answer: B

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33. A greenish yellow gas reacts with an alkali metal hydroxide to form a halate which can be used in fireworks and safety matches. The gas and the halate are

- A. $Br_2, KBrO_3$
- B. $Cl_2, KClO_3$
- C. $I_2, NaIO_3$
- D. $Cl_2, NaClO_3$

Answer: B

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34. Sodium extract of an organic compound gives blood red colour with $FeCl_3$. It contains

- A. not simple harmonic
- B. simple harmonic with amplitude 0.2m
- C. N a & S both
- D. N or S

Answer: C

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35. The rate of esterification of acetic acid with methyl alcohol (I) , ethyl alcohol (II) , isopropyl alcohol (III) and tertiary butyl alcohol (IV) follow in

the order -

A. $I > II > III > IV$

B. $IV > III > II > I$

C. $II > I > IV > III$

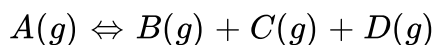
D. $III > IV > I > III$

Answer: A



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36. An unknown compound A dissociates at $500^{\circ}C$ to give products as follows -



Vapour density of the equilibrium mixture is 50 when it dissociates to the extent to 10% . What will be the molecular weight of compound A-

A. 120

B. 130

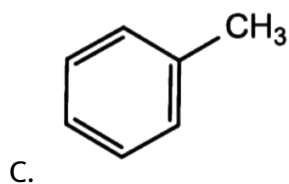
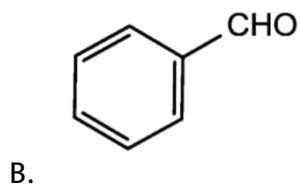
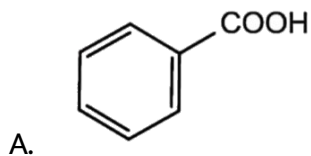
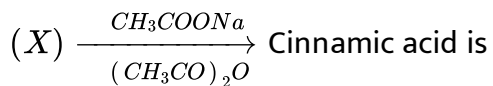
C. 134

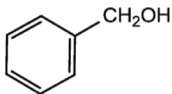
D. 140

Answer: A

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37. The reactant (X) in the reaction,





Answer: B

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38. For tetrahedral co-ordination the radius ratio (r^+ / r^-) should be

A. 0.414 – 0.732

B. > 0.732

C. 0.156 - 0.225

D. 0.225 - 0.414

Answer: D

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39. Which one of the following statements is FALSE ?

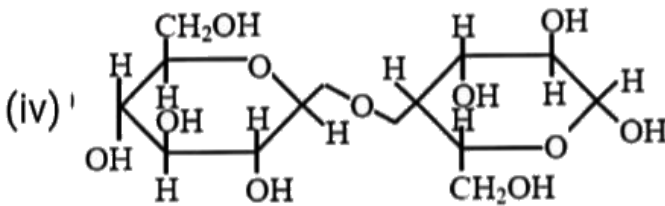
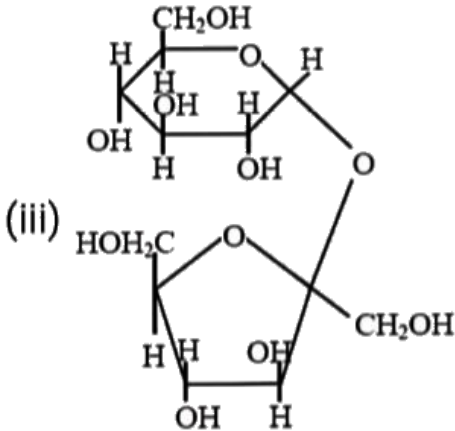
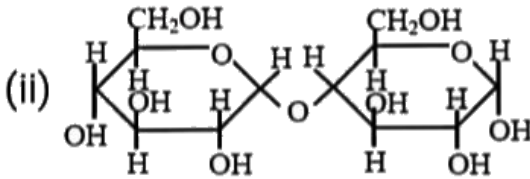
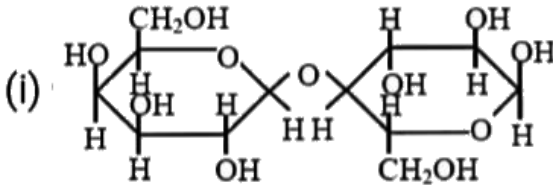
- A. Raoult's law states that the vapour pressure of a component over a solution is proportional to its mole fraction in solution
- B. The osmotic pressure (π) of a solution is given by the equation $\pi = iCRT$ where C is the molarity of the solution.
- C. The correct order of osmotic pressure for 0.01 M aqueous solution of each compound is $BaCl_2 > KCl > CH_3COOH > \text{sucrose}$
- D. none of these

Answer: D



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40. Which of the following are non-reducing sugars -



A. i&iv

B. I,II & IV

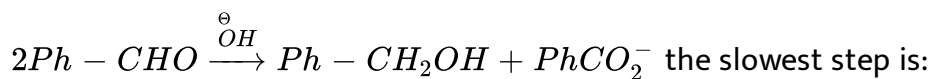
C. III

D. II & IV

Answer: C

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41. In the Cannizzaro reaction given below:

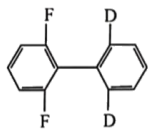


- A. The attack of OH^- at the carbonyl group
- B. The transfer of hydride to the carbonyl group
- C. The abstraction of proton from the carboxylic group
- D. The deprotonation of $Ph - CH_2OH$

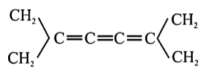
Answer: B

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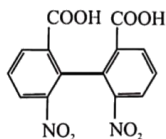
42. Which of the following is optical active substance ?



A.



B.



C.

D. Both (A) and (B)

Answer: C

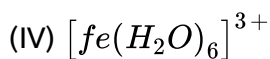
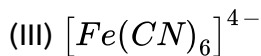
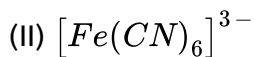
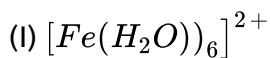


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43. Coordination compounds plays many important roles in animals and plants. They are essential in the storage and transport of oxygen as electron transfer agents as catalysts and in photosynthesis. A wide range of applications in daily life takes place through the formation of complexes.

Photographic fixing qualitative and quantitative analysis purification of water metallurgical extraction are some specific worth mentioning

Arrange of the following in order of decreasing number of unpaired electrons



(a) IV,I,II,III

(b) I, II, III, IV

(c) III, II, I, IV

(d) II,III,I,IV .

A. IV,I,II,III

B. I,II,III,IV

C. III,II,I,IV

D. II,III,I,IV

Answer: A

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44. The compound $(SiH_3)_3N$ is expected to be

- A. pyramidal and more basic than $(CH_3)_3N$
- B. planar and less basic than $(CH_3)_3N$
- C. pyramidal and less basic than $(CH_3)_3N$
- D. planar and more basic than $(CH_3)_3N$

Answer: B

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45. A certain weak acid has a dissociation constant of 1.0×10^{-4} . The equilibrium constant for its reaction with a strong base is

- A. 1.0×10^{-4}
- B. 1.0×10^{-10}

C. 1.0×10^{-14}

D. 1×10^{10}

Answer: D



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