



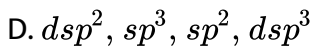
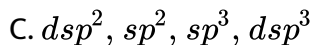
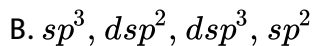
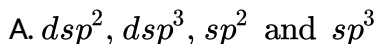
CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA JEE MOCK TEST 94

Chemistry

1. The correct order of hybridization of the central atom in the following species NH_3 , $[PtCl_4]^{2-}$, PCl_5 , and BCl_3 is



Answer: B



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2. Calculate the uncertainty in velocity if the uncertainty in the position of a moving bullet of mass 10 gm is $10^{-5}m$.

A. $5.2 \times 10^{-28}m/sec$

B. $3.0 \times 10^{-28}m/sec$

C. $5.2 \times 10^{-22}m/sec$

D. $3 \times 10^{-22}m/sec$

Answer: A



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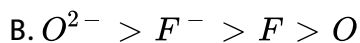
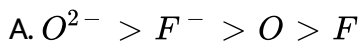
3. Which of the following statement is incorrect for ligand - metal complex

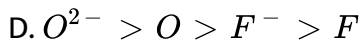
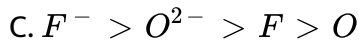
- A. Larger the donor atom of the ligand, the more stable is the metal - ligand bond
- B. Highly charged ligand forms strong bond
- C. Larger the permanent dipole moment of ligand, the more stable is the bond
- D. Greater the ionization potential of central metal, the stronger is the bond

Answer: B

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4. Arrange the given species F , F^- , O and O^{2-} in the order of their radii





Answer: A

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5. Identify the incorrect statement from the given below.

A. Lithopone is cheap and possess good covering power

B. Lithopone is yellow pigment

C. Lithopone is prepared by mixing barium sulphide and zinc sulphate

D. Lithopone is used in medicine as radiocontrast agent.

Answer: B

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6. A gas X at 1 atm is bubbled through a solution containing a mixture of $1\text{M } Y^-$ and $1\text{M } Z^-$ at 25°C . If the reduction potential of $Z > Y > X$, then

- A. Y will oxidize X and not Z
- B. Y will oxidize Z and not X
- C. Y will oxidize both X and Z
- D. Y will reduce both X and Z

Answer: A



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7. Benzene react with nitrating mixture (conc. HNO_3 and conc H_2SO_4) to produce nitrobenzene. In the nitrating mixture, HNO_3 acts as a

- A. Base
- B. Acid

C. Reducing agent

D. Catalyst

Answer: A



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8. Which polymer can be used for making contact lenses for eyes

A. Polymethylmethacrylate

B. Polyethelene

C. Polyethylacrylate

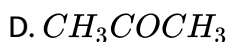
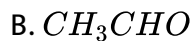
D. Nylon - 6

Answer: A



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9. Cyanohydrin of which of the following compound can forms lactic and



Answer: B



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10. Sulpha drugs are used for

A. Precipitating bacteria

B. Removing bacteria

C. Decreasing the size of bacteria

D. Stopping the growth of bacteria

Answer: D

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11. Arrange the following given acids in decreasing order of their K_a values

$FCH_2COOH(P)$, $ClCH_2COOH(Q)$, $O_2NCH_2COOH(R)$, $NCCH_2COOH(S)$

A. $R > P > S > Q$

B. $P > Q > R > S$

C. $R > S > Q > P$

D. $R > S > P > Q$

Answer: D

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12. In Victor Meyers method, 0.2 g of an organic substance displaced 56 mL of air at STP. The molecular mass of the compound is

- A. 56
- B. 112
- C. 80
- D. 28

Answer: C

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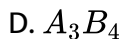
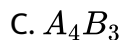
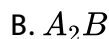
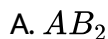
13. Which of the following ions has the highest magnetic moment

- A. Ti^{3+}
- B. Sc^{3+}
- C. Mn^{2+}
- D. Zn^{2+}

Answer: C

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14. In a solid 'AB' having rock salt arrangement (*NaCl* structure), 'A' atoms occupy the corners and face center of the cubic unit cell. 'B' atoms occupies all octahedral voids of the unit cell. If all the face - centered atoms along one of the axes are removed, then the resultant stoichiometry of the solid is



Answer: D

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15. Which among the following given properties is not a stable function

A. internal energy

B. Enthalpy

C. Work

D. Entropy

Answer: C



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16. When MnO_2 is fused with KOH , a coloured compound is formed, the product and its colour is:

A. K_2MnO_4 , purple green

B. $KMnO_4$, purple

C. Mn_2O_3 , brown

D. Mn_3O_4 black

Answer: A



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17. Assertion : Azeotropic mixtures are formed only by non - ideal solutions and they may have boiling points either greater than both the components or less than both the components.

Reason : The composition of the vapour phase is same as that of the liquid phase of an azeotropic mixture.

- A. If both assertion and reason are true and the reason is the correct explanation of the assertion.
- B. If both assertion and reason are true but reason is not the correct explanation of the assertion.
- C. If assertion is true but reason is false.
- D. If assertion is false but reason is true.

Answer: B



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18. The following are the Vander Waal's parameters for four gases W, X, Y and Z

Gas	a ($\text{atmL}^2\text{mol}^{-2}$)	b (Lmol^{-1})
W	4.0	0.027
X	8.0	0.030
Y	6.0	0.032
Z	12.0	0.027

Based on given values identify, which one of these gases has highest critical temperature

A. W

B. X

C. Y

D. Z

Answer: D

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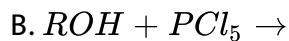
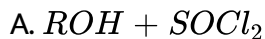
19. How physical adsorption will be effected by increase in temperature

- A. It will decrease
- B. It will increase
- C. First increase then decrease
- D. None of these

Answer: A

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20. Which of the given below is best method of preparing alkyl chloride?



Answer: A

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21. The pH of 0.1 M solution of a weak acid (HA) is 4.50. It is neutralised with certain amount of $NaOH$ solution to decrease the acid content to half of initial value. Calculate the pH of the resulting solution.

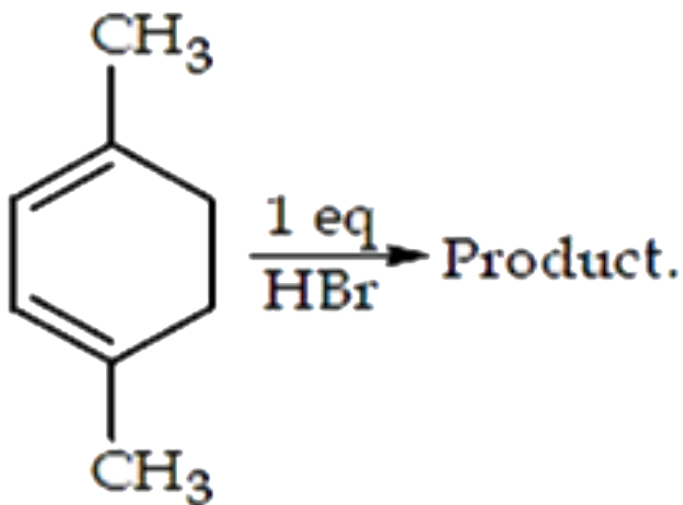
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22. How many isomers of $C_5H_{11}Br$ show stereochemical inversion when it undergoes SN^2 reaction?

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23. At 300 k the half - life a sample of a gaseous compound initially at 1 atm is 100 sec. When the pressure is 0.5 atm the half - life is 50 sec. The order of reaction is

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24.

No of allylic hydrogens in thermodynamic product is "X"

No of allylic hydrogens atom in kinetic product is "Y"

The value of $|X + Y|$ is



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25. The number of carbonate ore among the following.

pyrolusite, Malachite, Diaspore, Calamine, Cassiterite, Siderite, Cerussite, Pyrite, Dolomite, Magnesite.



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