



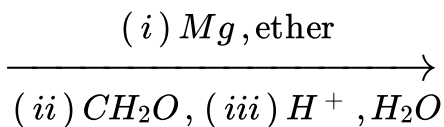
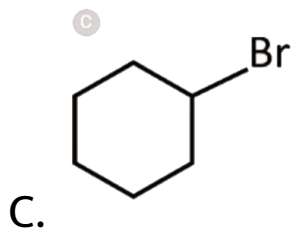
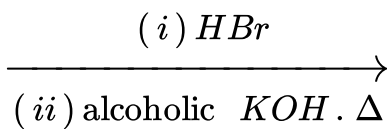
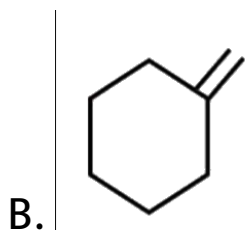
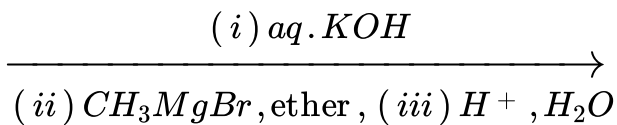
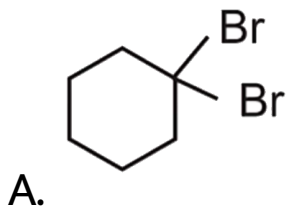
CHEMISTRY

BOOKS - NTA MOCK TESTS

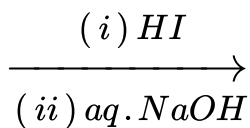
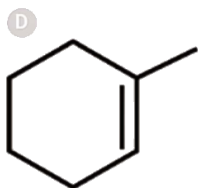
JEE MOCK TEST 15

Mcqs Chemistry

1. Which reaction produce 1-methylcyclohexene



D.



Answer: B



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2. $[NiCl_4]^{2-}$, $[PtCl_4]^{2-}$ and $[PdCl_4]^{2-}$ are respectively:-

A. high spin, low spin, high spin

B. low spin, low spin, low spin

C. high spin, low spin, low spin

D. low spin, high spin, high spin

Answer: C



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3. Glucose does not react with

A. pure HCN

B. Schiff's reagent

C. $NaHSO_3$

D. all of these

Answer: D



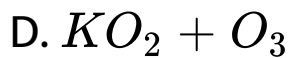
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4. Potassium ozonide on decomposition gives

A. $K + O_2$

B. $K_2O + O_2$

C. $KO_2 + O_2$



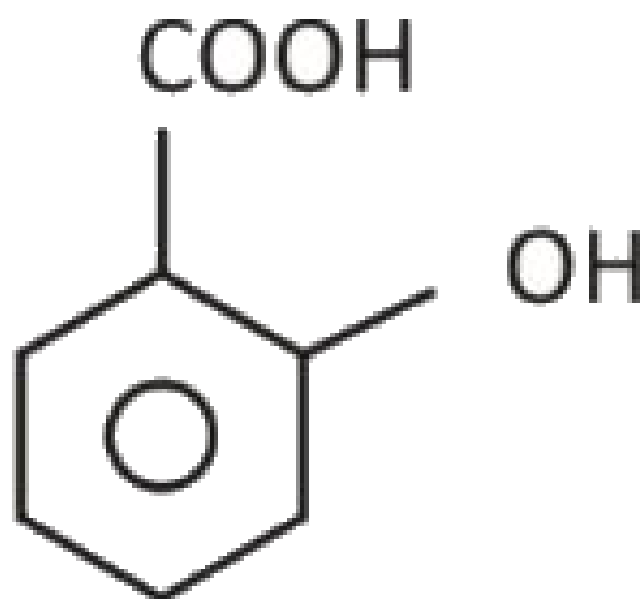
Answer: C



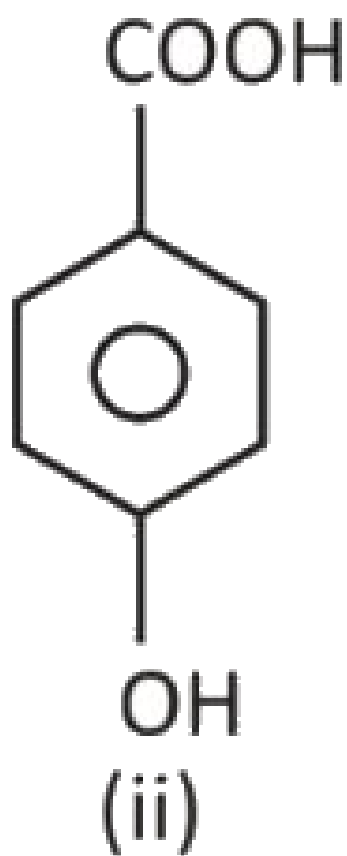
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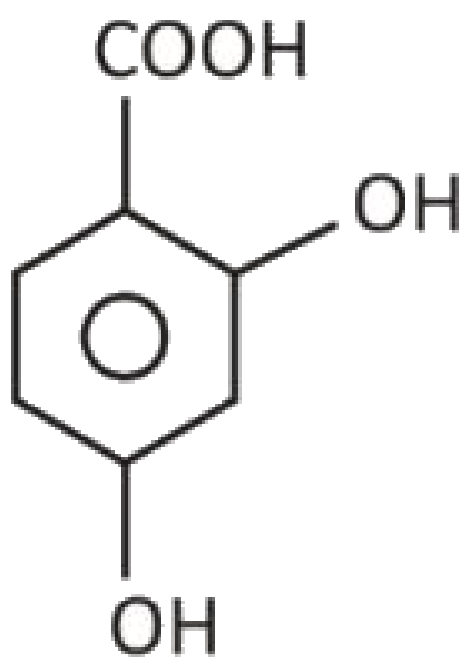
5. The order of k_a values of the following acids

is:

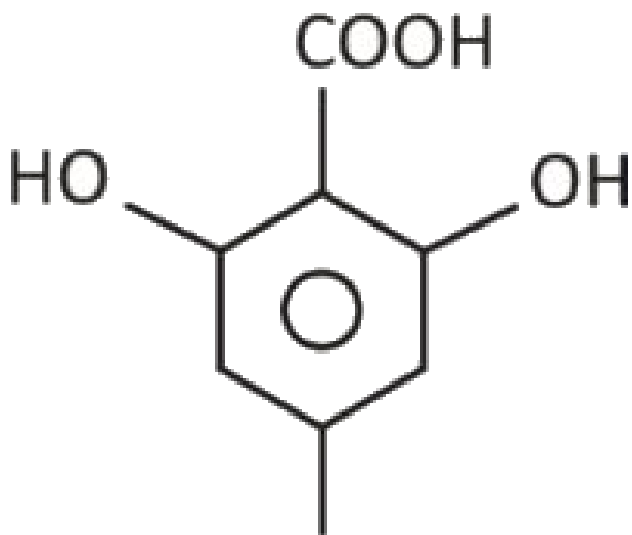


(i)





(iii)



(iv)

A. $(i) > (iv) > (iii) > (iv)$

B. $(iv) > (i) > (iii) > (ii)$

C. $(iii) > (iv) > (i) > (ii)$

$$D. (iv) > (i) > (ii) > (iii)$$

Answer: B



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$$6. K_{sp} \text{ of } Al(OH)_3 = 10^{-36}$$

$$\text{and } E_{Al^{3+}/Al}^{\circ} = -1.66V$$

Reduction potential of Al^{3+}/Al couple at

$pH = 12$ and $298K$ is

A. $1.07V$

B. 2.25V

C. $-1.07V$

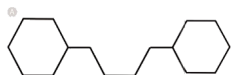
D. $-2.25V$

Answer: D



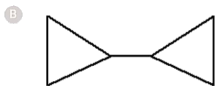
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7. The hydrocarbon that cannot be prepared effectively by Wurtz reaction is

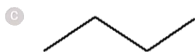


A.

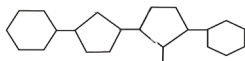
B.



C.



D.



Answer: D



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8. What is the $[OH^-]$ concentration of a 0.04 M solution of CH_3COONa ?

$$[K_a \text{ of } CH_3COOH = 2 \times 10^{-5}, \log 2 = 20]$$

A. 5×10^{-6}

B. 6×10^{-6}

C. 2×10^{-9}

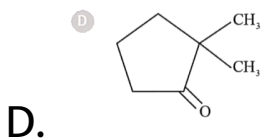
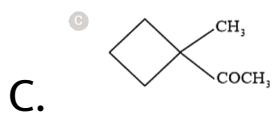
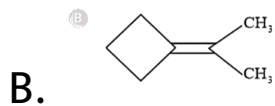
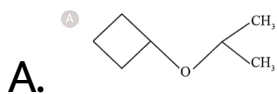
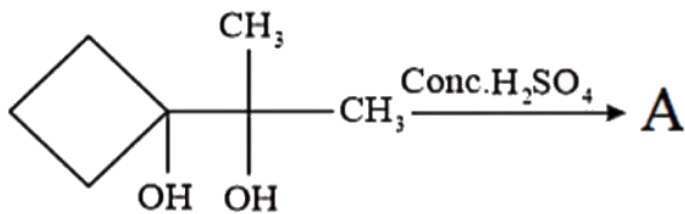
D. 3×10^{-9}

Answer: A



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9. The product A is

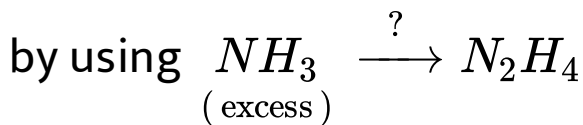


Answer: D



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10. The following conversion can be obtained



Answer: A





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11. White bauxite is leached by

A. Hall's process

B. Serpeck's process

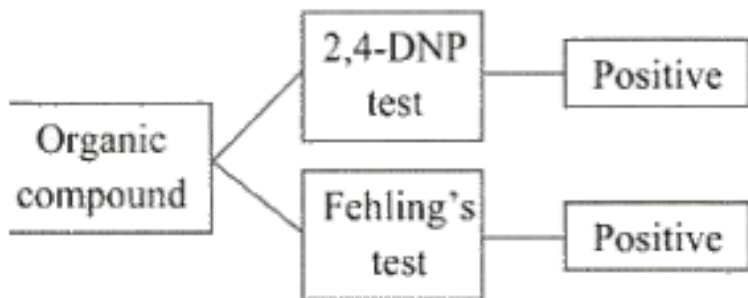
C. Bayer's process

D. All of these

Answer: B



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12.

How many among the following compounds will give the above result?

- i. Cyclohexanone
- ii. Acetone
- iii. Propionaldehyde.
- iv. Acetophenone.
- v. Acetaldehyde

vi. Benzophenone

vii. Benzaldehyde.

A. 2

B. 3

C. 4

D. 5

Answer: A



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13. Strontium crystallizes in a fcc unit cell with edge length a . it contains 0.2% Frenkel defect and another crystal of Sr contains 0.1% Schottky defect. Density of solid with Frenkel defect= d_f and density with Schottky defect= d_S , then

A. $d_f = d_S$

B. $d_f > d_S$

C. $d_f < d_S$

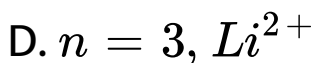
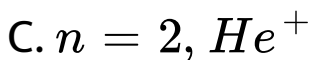
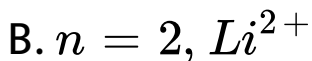
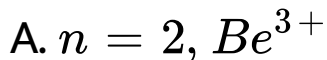
D. $d_f = 2d_S$

Answer: B



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14. Which hydrogen -like species will have the same radius as that of Bohr orbit of hydrogen atom ?



Answer: A



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15. Compound found by hydrolysis of $BiCl_3$

is:-

- A. Bismuth hydroxide
- B. Bismuth oxychloride
- C. Bismuth oxide
- D. Oxo acid of bismuth

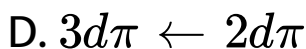
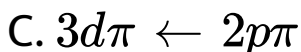
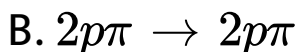
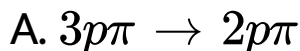
Answer: B



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16. Select which type of overlapping is responsible for π -character in $Si - N$ bond

N_3SiNCO



Answer: C



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17. Which statement is incorrect with reference to inner transition elements?

A. The oxides of lanthanoids are basic

B. Pm is radioactive element among actinoids

C. The values of ionization enthalpy of actinoids are less than the values of ionization enthalpy of lanthanoids

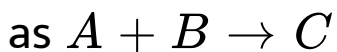
D. Only in the electronic configuration of lanthanoids like Ce, Gd, Lu the electron are filled in 5d orbitals

Answer: B



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18. A reaction between A and B is represented



Observations on the rate of this reaction are obtained as

S.No.	Initial concentration (A) ₀ M	Initial concentration (B) ₀ M	Initial rate of reaction Mhr ⁻¹
1.	0.1	1.0	5.0×10^{-3}
2.	0.1	2.0	2.0×10^{-2}
3.	0.05	1.0	2.5×10^{-3}

Order of reaction with respect to A and B respectively are:-

A. 1,2

B. 1,1

C. 2,1

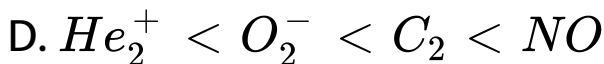
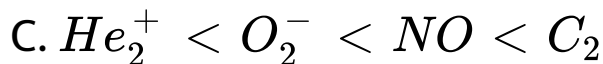
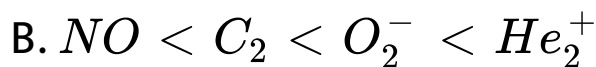
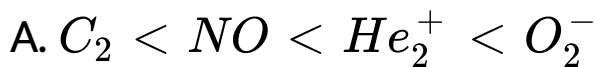
D. 2,2

Answer: A



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19. Which of the following option w.r.t. increasing bond order is correct ?



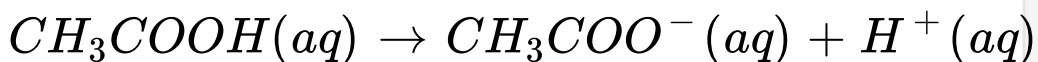
Answer: D



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20.

Given,



$$\Delta H_{rxn}^\circ = 0.004 \text{ kcal } gm^{-1}$$

Enthalpy change when 1 mole of $Ba(OH)_2$, a strong base, is completely neutralized by $CH_3COOH(aq)$ is (ΔH° of neutralization of strong acid with strong base is $-13.7 \text{ kcal mol}^{-1}$)

A. -27.46 kcal/mol

B. 27.46 kcal/mol

C. -26.92 kcal/mol

D. -13.46 kcal/mol

Answer: C



21. Determine which of the following statements are true at very high pressure for a real gas:

(a) Compressibility factor is greater than 1.

(b) Compressibility factor varies linearly with pressure.

(c) Molar volume occupied by gas is more as compared to ideal gas at similar pressure and temperature.

(d) Gas is less compressible as compare to

ideal gas.

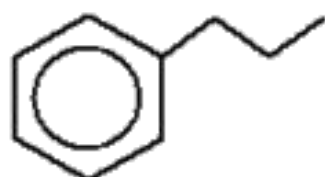
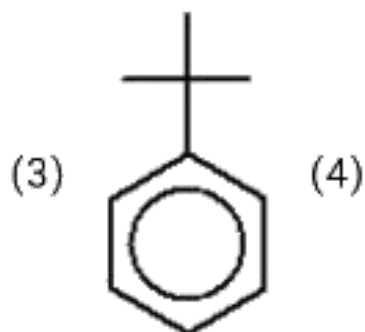
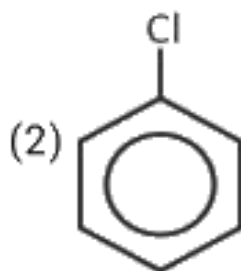
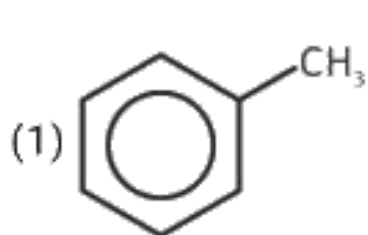
(e) Compressibility factor is given by

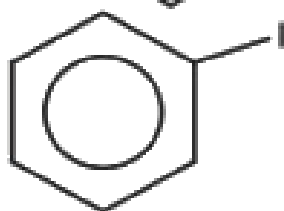
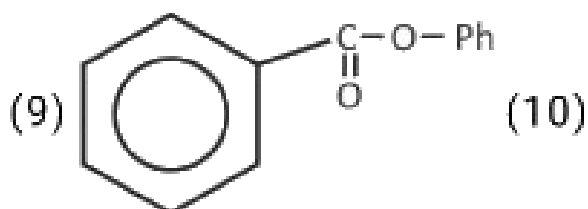
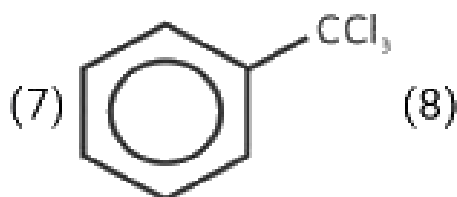
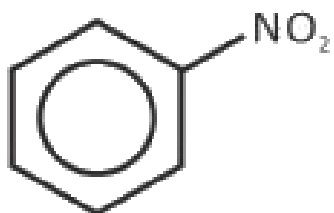
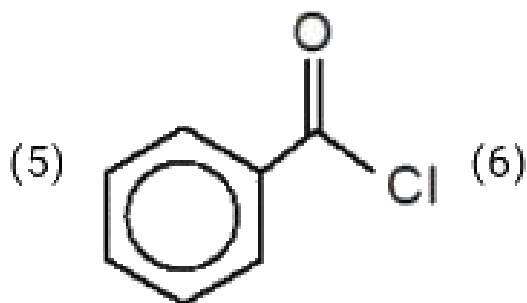
$$Z = 1 + \frac{Pb}{RT}$$



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22. How many compounds having higher rate of electrophilic substitution than benzene

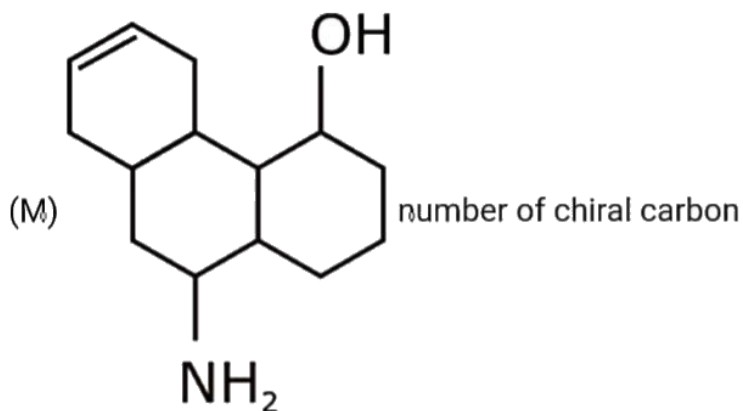




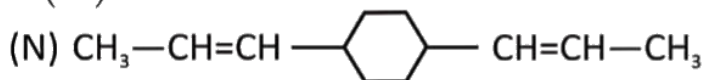


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23. in (M)=x



in (M) = x



(Number of Geometrial isomers in (N)=y). The

value of $\frac{y}{x}$ is



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24. 0.002 molal aqueous solution of an ionic compound with molecular formula

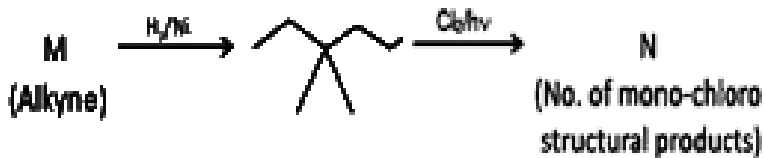
$Co(NH_3)_5(NO_2)Cl$ freezes at $-0.00744^\circ C$.

How many moles of ions does 3 moles of the salt produce on being dissolved in water?

[Given K_f of water = $1.86 \text{ K kg mol}^{-1}$]



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25.

$M \rightarrow$ Possible alkynes Write the sum of value of $M + N$.

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