



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET SET 88

Chemistry

1. The wavelength will be minimum for which of the following electronic transition in an unielectron species?

A. $n = 6$ to $n = 4$

B. $n = 4$ to $n = 2$

C. $n = 3$ to $n = 1$

D. $n = 2$ to $n = 1$

Answer: C

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2. The correct solubility order is/are

I. $CaCO_3 > SrCO_3 > BaCO_3$

II. $Li_2CO_3 < Na_2CO_3 < K_2CO_3$

III. $K_2CO_3 < Rb_2CO_3 < Cs_2CO_3$

IV. $Na_2CO_3 > K_2CO_3 > Rb_2CO_3$

A. II,IV

B. I,IV

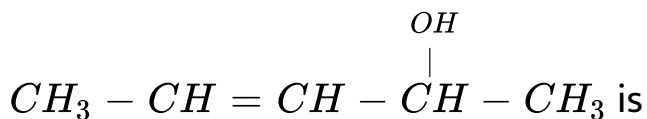
C. III, II, IV

D. I,II,III

Answer: D

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3. Number of stereoisomers of the given compound



A. 2

B. 4

C. 3

D. 6

Answer: B



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4. How many molecules are there in 10 drops water, if its volume is 0.05 ml per drop and density is 1 g per ml?

A. 1.667×10^{22}

B. 1.667×10^{23}

C. 6.023×10^{23}

D. None

Answer: A



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5. Setting of plaster of Paris involves

- A. oxidation by atmospheric oxygen
- B. reaction with atmospheric carbon dioxide
- C. dehydration
- D. hydration to yield another hydrate

Answer: D



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6. Incorrect order of Heat of hydrogenation per π -bond is

- A. cis - 2 - butene

B. trans - 2 - butene

C. 2,3 - dimethyl -2- butene

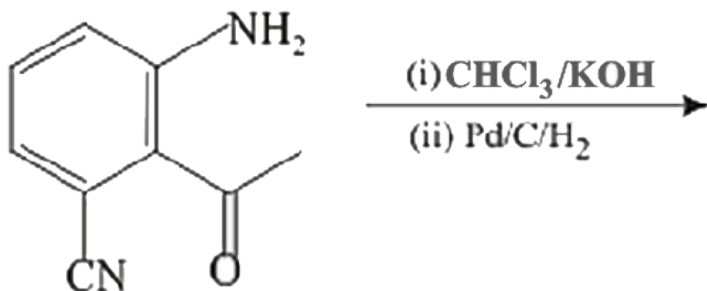
D. benzene

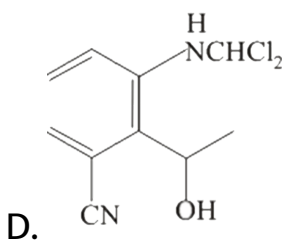
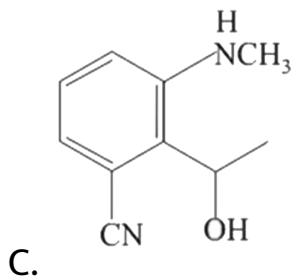
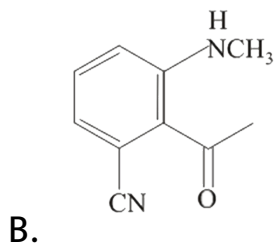
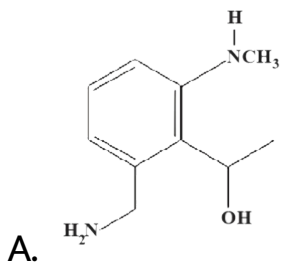
Answer: D

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7. The major product obtained in the following reaction is

:

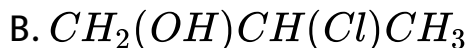
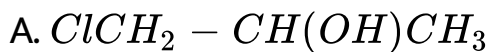




Answer: A

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8. The reaction of chlorine water with propene gives

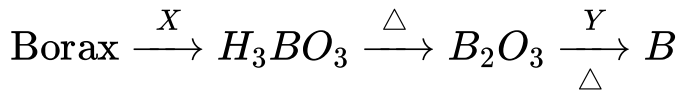


Answer: A



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9. Borax is converted into amorphous Boron by following steps



X and Y are respectively

A. HCl, Mg

B. HCl, C

C. C, Al

D. dil HCl

Answer: D



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10. Rectified spirit contains :

A. 0.118

B. 0.811

C. 0.999

D. 0.881

Answer: D



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11. H_2O_2 is prepared in laboratory by action of H_2SO_4 with

A. Na_2O_2

B. BaO_2

C. $BaO_2 \cdot 8H_2O$

D. Both A and C

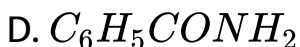
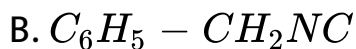
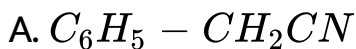
Answer: D

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12. In the given reaction



will be



Answer: B



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13. Which among the following is a false statement ?

A. SiO_2 has a structure similar to that of CO_2

B. Natural Si exists only in the combined state

C. Si can be prepared by reducing SiO_2 with Mg.

D. Si does exist in graphite - like structure , but exists only in diamond like structure

Answer: A



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14. The vapour pressure of mercury is 0.002 mm Hg at 27°C . K_c for the process $\text{Hg}(l) \rightleftharpoons \text{Hg}(g)$ is :

A. $1.068 \times 10^{-7} M$

B. $0.002 M$

C. $8.12 \times 10^{-5} M$

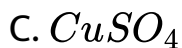
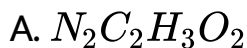
D. $3.9 \times 10^{-5} M$

Answer: A



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15. Which oxide produces the most acidic solution when 0.1 mol is added to 1L of H_2O ?



Answer: B



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16. Ammonolysis of R - X give

A. Only p - amine

B. Only sec amine

C. Only quaternary ammonium halide

D. Mixture of Primary, Secondary , Tertiary and quaternary ammonium halide

Answer: D



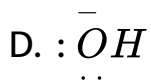
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17. Which of the following represents chelating ligand ?

A. SCN^-

B. $:\bar{C} \equiv N:$

C. 2,2- Dipyridyl



Answer: C

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18. Propyne on passing through red hot copper tube forms

A. benzene

B. 1,3,5 - trimethylbenzene

C. toluene

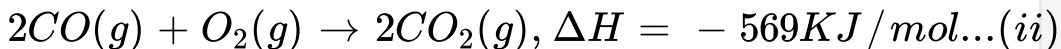
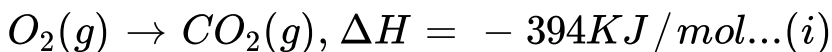
D. hexamethylbenzene

Answer: B



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19. Based on the following reaction $C(\text{graphite}) +$



The heat of formation of CO will be

A. $+109.5kJ$

B. $0219kJ$

C. $-109.5KJ$

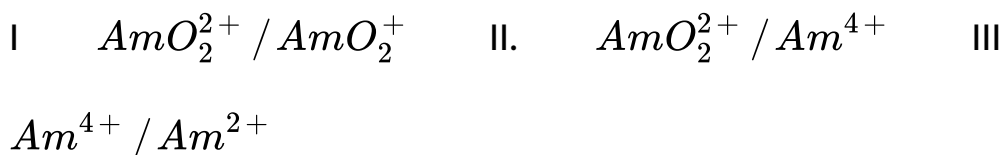
D. $-219KJ$

Answer: B



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20. For which of these oxidation/reduction pairs will the reduction potential vary with pH?



A. I only

B. II only

C. I and II only

D. I, II and III

Answer: B



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21. Which of the following is correct ?

A. The number of electrons present in the valence shell of S in SF_6 is 12

B. The rates of reactions involving ionic compounds are very slow.

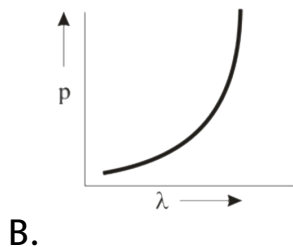
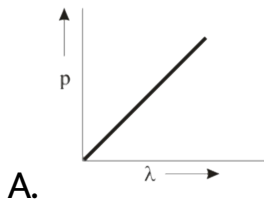
C. According to VSEPR theory $SnCl_2$ is a linear molecule

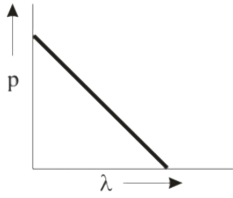
D. The correct order of ability to form ionic compounds among Na^+ , Mg^{2+} and Al^{3+} is $Al^{3+} > Mg^{2+} > Na^+$

Answer: A

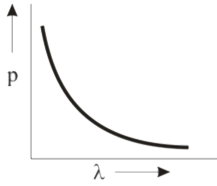
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22. Which of the following graphs correctly represents the variation of particle momentum with associated de Broglie wavelength?





C.



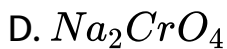
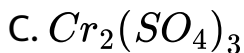
D.

Answer: D

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23. Which of the following statements is/are correct, when a mixture of $NaCl$ and $K_2Cr_2O_7$ is gently warmed with concentrated H_2SO_4 ?

A. CrO_2Cl_2



Answer: A

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24. Osmotic pressure of 40 % (wt./vol.) urea solution is 1.64atm and that of 3.42 % (wt./vol.) cane sugar is 2.46atm . When equal volumes of the above two solutions are mixed, the osmotic pressure of the resulting solution is:

A. 1.64 atm

B. 2.46 atm

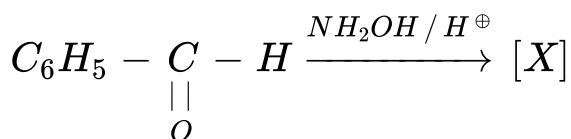
C. 4.10 atm

D. 2.05 atm

Answer: D

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25. In the given reaction [X] will be :



A. Mixture of syn and anti oxime

B. Only syn oxime

C. Only anti oxime

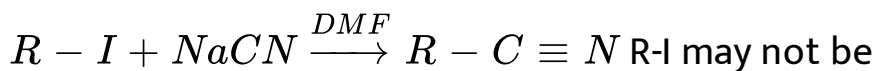
D. Reaction will not take place (NR)

Answer: A



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26. In the given reaction



A. Primary

B. Secondary

C. Tertiary

D. $CH_3 - I$

Answer: C



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27. Calculate the resonance energy of N_2O from the following data

$$\Delta_f H^\ominus \text{ of } N_2O = 82 \text{ kJ mol}^{-1}$$

Bond energy of $N \equiv N$, $N = N$, $O = O$, and $N = O$ bond is 946, 418, 498, and 607 kJ mol^{-1} , respectively.

A. $+ 8.85 \text{ KJ mol}^{-1}$

B. $- 88 \text{ KJ mol}^{-1}$

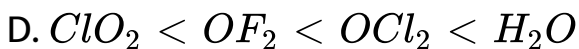
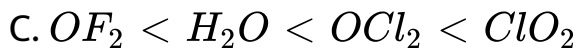
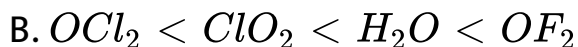
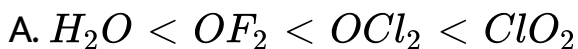
C. $- 8.8 \text{ KJ mol}^{-1}$

D. $+ 88 \text{ KJ mol}^{-1}$

Answer: B

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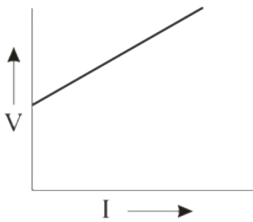
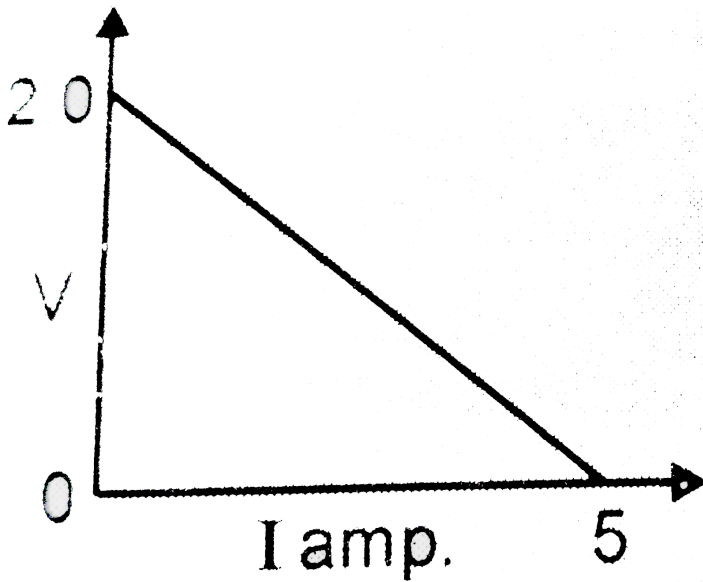
28. Which of the following sequence represents the correct increasing order of bond angle in the given molecular ?



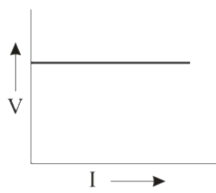
Answer: C

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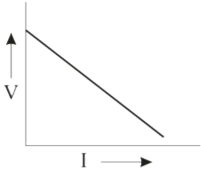
29. For a cell, the graph between the potential difference (V) across the terminals of the cells and the current I drawn from the cell is as shown in figure. Calculate the e.m.f. and the internal resistance of the cell.



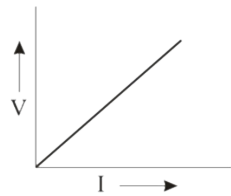
A.



B.



C.



D.

Answer: C



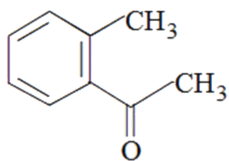
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30. Compound $A(C_9H_{10}O)$ shows positive iodoform test.

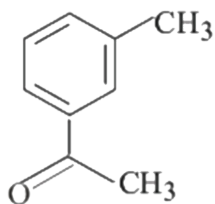
Oxidation of A with $KMnO_4/KOH$ gives acid

$B(C_8H_6O_4)$. Anhydride of B is used for the preparation

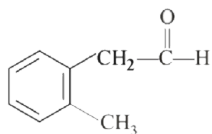
of phenolphthalein. Compound A is:



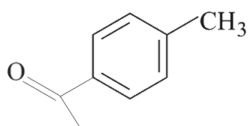
A.



B.



C.



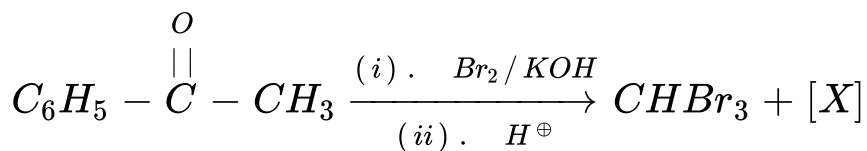
D.

Answer: A



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31. In the given reaction



[X] will be:

- A. $C_6H_5 - CHO$
- B. $C_6H_5 - COOH$
- C. $C_6H_5 - CH_2OH$
- D. CH_3COOH

Answer: B

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32. Protein is a polymer of

- A. Amino acid
- B. α - D - amino acid
- C. α - L - amino acid
- D. β - amino acid

Answer: C

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33. Statement : To stop bleeding from an injury, ferric chloride can be applied. Which comment about the statement is justified?

- A. $FeCl_3$ seals the blood vessels

B. $FeCl_3$ changes the direction of blood flow

C. $FeCl_3$ reacts with blood to form a solid substance

which seals the blood vessel

D. $FeCl_3$ causes denaturation of proteins present in

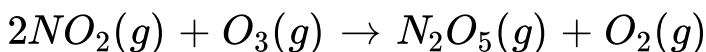
blood

Answer: D



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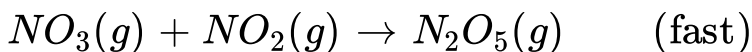
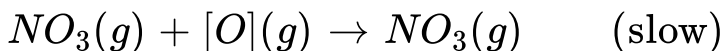
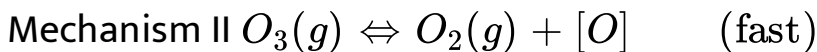
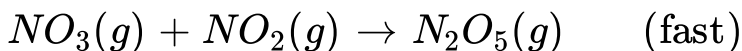
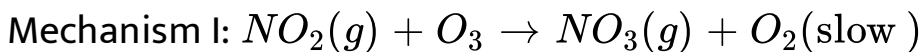
34. Consider this reaction :



The reaction of nitrogen dioxide and ozone represented

is first order in $NO_2(g)$ and in $O_3(g)$. Which of these

possible reaction mechanisms is consistent with the rate law?



A. Only I

B. Only II

C. Both I and II

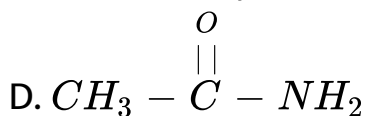
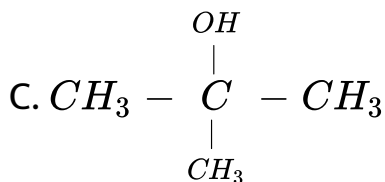
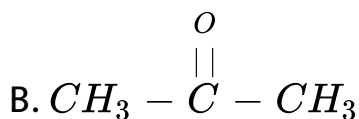
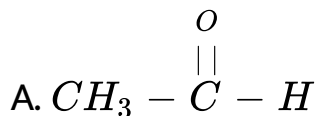
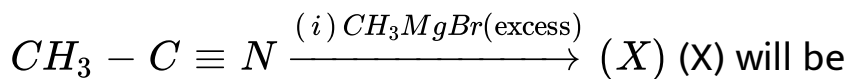
D. Neither I nor II

Answer: C



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35. In the given reaction

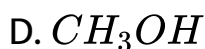


Answer: B



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36. In the given reaction $CH_3MgBr + D_2O \rightarrow (X)$, (X) will be



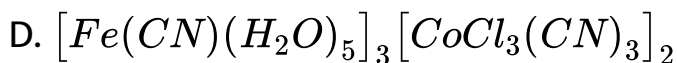
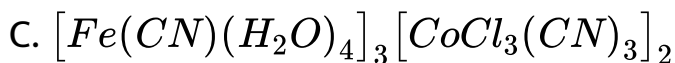
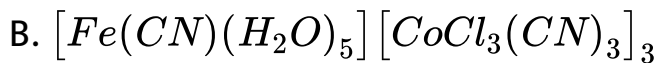
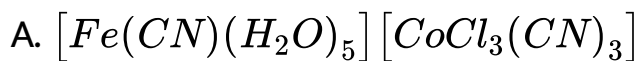
Answer: B



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37. Which of the following complex compound is "Pentaaquacyanidoiron (III) trichloridotricyanido

cobaltate (III) " ?

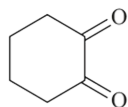


Answer: D

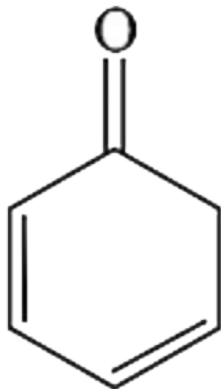


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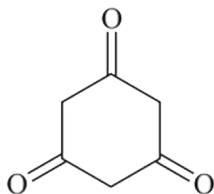
38. In which of the following compound, enol form exists?



A.



B.



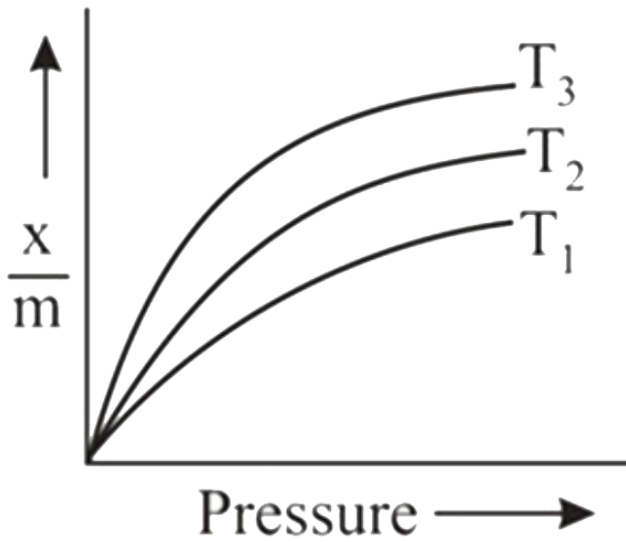
C.

D. All of these

Answer: D

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39. The variation of extent of adsorption with pressure at a given constant temperature is given in following figure



Which of the following relation between temperature of isotherms is correct ?

A. $T_1 = T_2 = T_3$

B. $T_1 < T_2 < T_3$

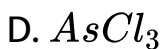
C. $T_3 < T_2 < T_1$

D. $T_1 < T_2 > T_3$

Answer: C

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40. Which of the following trihalides is not hydrolysed



Answer: A

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41. Lysine is an essential amino acid because

A. β - Amino acid

B. acidic

C. basic

D. neutral

Answer: C



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42. When NaCl is doped with 10^{-5} mole % of $SrCl_2$, what is the no. of cationic vacancies?

A. $2 \times 10^{-7} N_A$

B. $10^{-7} N_A$

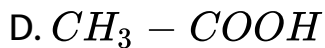
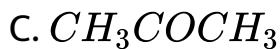
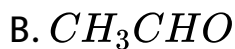
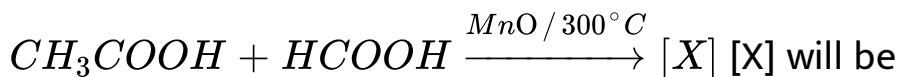
C. $10^{-5} N_A$

D. $10^{-6} N_A$

Answer: B

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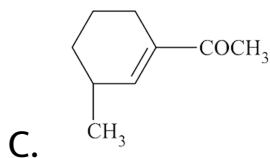
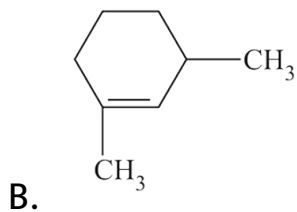
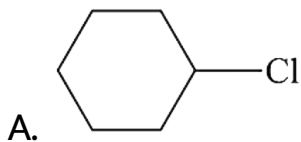
43. In the reaction

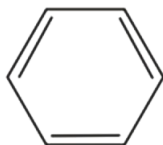


Answer: B

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44. In which of the following molecules all the effects namely inductive, mesomeric and hyperconjugation operate?



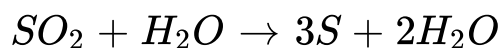


D.

Answer: C

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45. In the following reaction, which choice has value twice that of the equivalent mass of the oxidising agent



A. 64 g

B. 32 g

C. 48 g

D. 16 g

Answer: B



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