



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET TEST 101

Chemistry

1. The energy of an electron in excited hydrogen atom is -3.4 eV .
Then, according to Bohr's theory, the angular momentum of the
electron of the electron is

A. 2.11×10^{-34}

B. 3×10^{-34}

C. 2×10^{-34}

D. 0.5×10^{-34}

Answer: A

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2. The shape of XeF_3^+ is

A. Trigonal planar

B. Pyramidal

C. Bent T-shape

D. See - saw

Answer: C

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3. Flag - pole interaction is present in

- A. Boat form of cyclohexane
- B. Chair form of cyclohexane
- C. Anti form of n-butane
- D. Fully eclipsed form on n-butane

Answer: A

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4. Mole ratio of Fe in FeO , Fe_2O_3 and Fe_3O_4 samples of equal weights is

- A. 1 : 2 : 3
- B. 0.9 : 1 : 0.93
- C. 1 : 0.9 : 0.93

D. 3 : 2 : 1

Answer: C

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5. CS_2 and SO_3 react to produce

A. COS , SO_2

B. CO , SO_2

C. CO_2 , SO_2

D. CO_2 , S

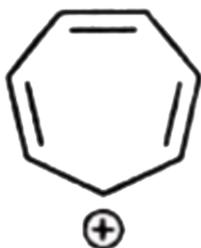
Answer: A

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6. Which one of the following compound is not a planar ?



A.



B.



C.



D.

Answer: A

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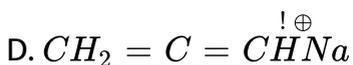
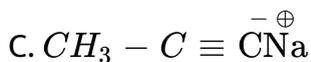
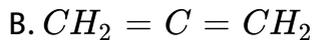
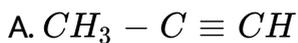
7. An ideal gas of certain mass is heated in a small vessel and then in a large vessel, such that their volume remains unchanged. The $P - T$ curves are :

- A. Parabolic with same curvature
- B. Parabolic with different curvature
- C. Linear with same slope
- D. Linear with different slope

Answer: D

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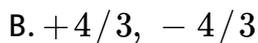
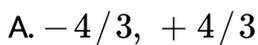
8. In the given reaction $\overset{\text{Br}}{\text{CH}_2} - \text{CH} = \text{CH}_2 \xrightarrow{\text{NaNH}_2 / \Delta} (\text{X})$ X will be



Answer: C

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9. Average oxidation number of carbon in C_3O_2 , Mg_2C_3 are respectively.



C. $-2/3, +2/3$

D. $-2/3, +4/3$

Answer: B

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10. The change in entropy, ΔS is positive for an endothermic reaction, if enthalpy change ΔH occurs at the same temperature T , then the reaction is feasible

A. at all temperatures

B. when $\Delta H > T\Delta S$

C. when $\Delta H < T\Delta S$

D. not feasible at all

Answer: C



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11. $N_2 + H_2 \rightarrow [X](g) \xrightarrow{CO_2, \text{Pressure}} [Y] \xrightarrow{\text{Heat}} [Z] + H_2O$ In the above sequence of reaction, [Y] and [Z] are respectively.

A. urea, ammonium carbonate

B. ammonium carbonate, urea

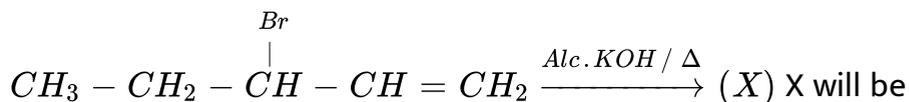
C. ammonium carbonate, urea

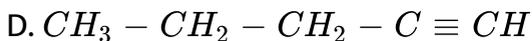
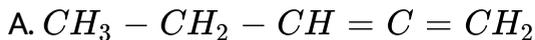
D. urea, hydrazine

Answer: B

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12. In the given reaction

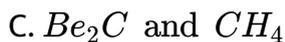
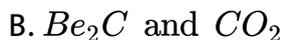
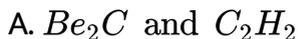




Answer: C

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13. $BeO + C \rightarrow CO + X \xrightarrow{H_2O} Be(OH)_2 + Y$; X and Y in the above sequence are respectively



Answer: C

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14. 2 g molecule of PCl_5 are heated in a closed vessel of two litre capacity. When the equilibrium is attained, PCl_5 is 40% dissociated into PCl_3 and Cl_2 . The equilibrium constant is

A. 0.534

B. 2.67

C. 26.7

D. 0.267

Answer: D

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List-I

- A. ΔG
- B. ΔH
- C. ΔS°
- D. ΔG°

List-II

- (i) $\Delta U + P\Delta V$
- (ii) $-nFE$
- (iii) $-RT \log_e K$
- (iv) $nR \log_e \left(\frac{V_2}{V_1} \right)$

15.

ItBrgt

Match the physical changes in List-I with their relations given in List-II:

A. P-2, Q-1, R-4, S-3

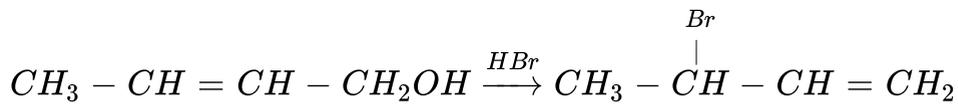
B. P-1, Q-2, R-3, S-4

C. P-4, Q-3, R-2, S-1

D. P-1, Q-2, R-4, S-3

Answer: A**Watch Video Solution**

16. The given reaction is



A. E1

B. S_N1

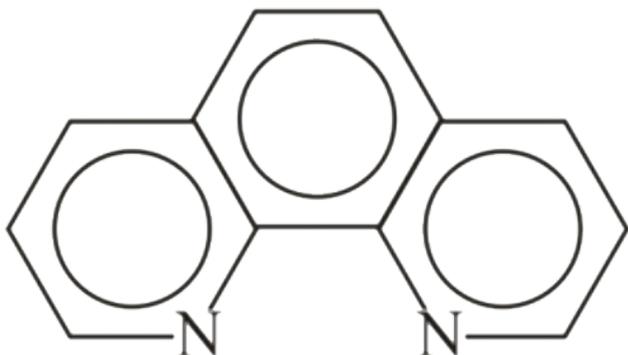
C. S_N2

D. E2

Answer: B

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17. The ligand shown here is



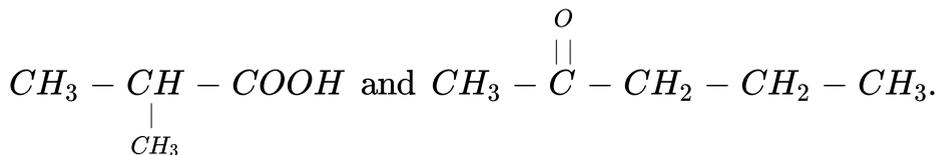
- A. Tridentate
- B. 1,10 - phenathroline
- C. 1,10 - phenanthrine
- D. 2,2- dipyridyl

Answer: B

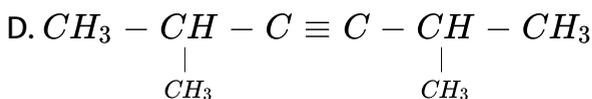
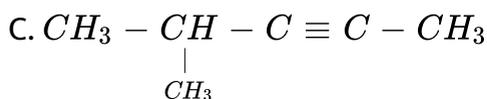
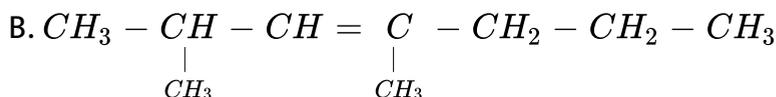
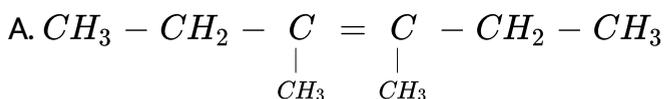


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18. Compound A on oxidation with not $KMnO_4/\overline{OH}$ given two compound



Compound A will have the structure



Answer: B

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19. In an irreversible process taking place at constant T and P and in which only pressure-volume work is being done, the change in Gibbs free energy (dG) and the change in entropy (dS) satisfy the criteria

A. $(dS)_{V,U} = 0, (dG)_{T,P} = 0$

B. $(dS)_{V,U} = 0, (dG)_{T,P} = +ve$

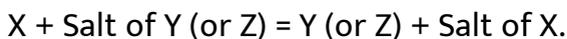
C. $(dS)_{V,U} = -ve, (dG)_{T,P} = -ve$

D. $(dS)_{V,U} = +ve, (dG)_{T,P} = -ve$

Answer: D

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20. Each of the three metals X, Y and Z were put in turn into aqueous solution of the other two .



Which observation is probably incorrect ?

A. Y + Salt of X = No action observed

B. Y + Salt of Z = Z + Salt of Y

C. Z + Salt of X = X + Salt of Z

D. Z + Salt of Y = No action observed

Answer: C

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21. SCl_2 is the best known dihalide of sulphur, hybrid state of sulphur in SCl_2 is

A. sp^2

B. sp^3

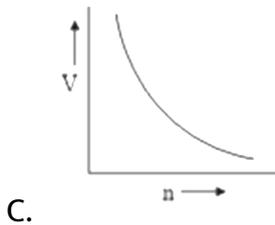
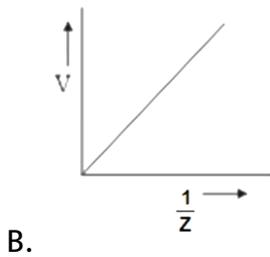
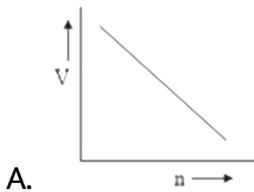
C. sp^3d

D. sp^2d^3

Answer: B

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22. Which of the following is correct for the velocity of electron ?



D. All are correct

Answer: C

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23. Which oxide of carbon is obtained when $K_4[Fe(CN)_6]$ is warmed with concentrated sulphuric acid ?

A. CO

B. CO_2

C. Both A and B

D. C_3O_2

Answer: A

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24. The specific conductance of a 0.5 N solution of an electrolyte at $25^{\circ}C$ is 0.00045 Scm^{-1} . The equivalent conductance of this electrolyte at infinite dilution is $300 \text{ Scm}^2\text{eq}^{-1}$. The degree of dissociation of the electrolyte is

- A. 0.66
- B. 0.03
- C. 0.003
- D. 0.3

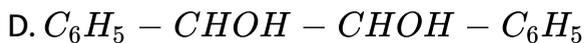
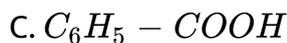
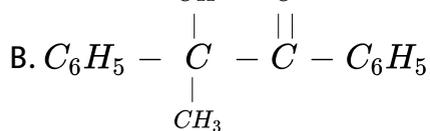
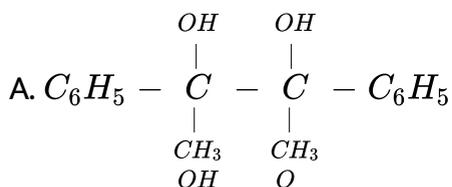
Answer: C

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25. In the given reaction $C_6H_5 - \overset{\overset{O}{||}}{C} - \overset{\overset{O}{||}}{C} - C_6H_5 \xrightarrow[\text{(ii) } HOH / H^{\oplus}]{\text{(i) } CH_3MgBr \text{ (excess)}}$

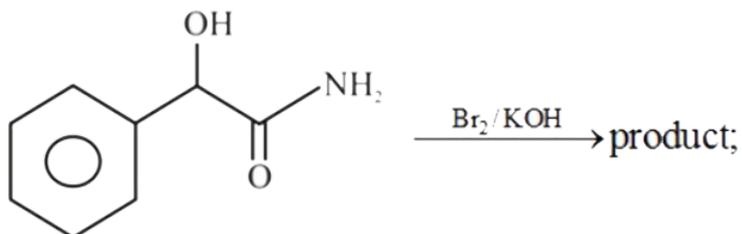
"Product

Product will be

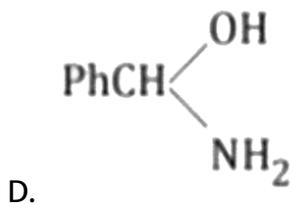
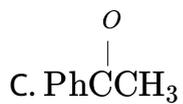


Answer: A

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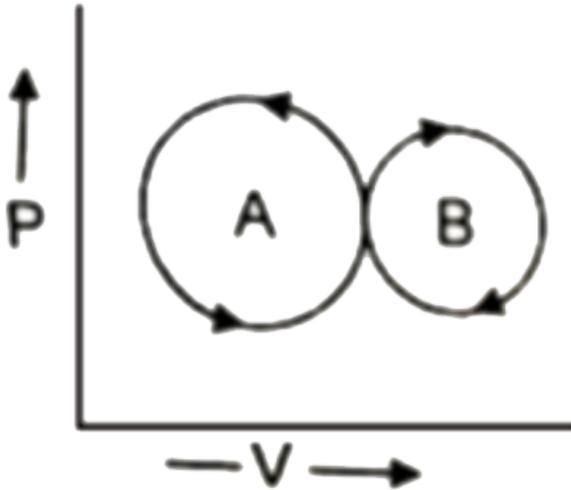


Product of this Hoffmann bromamide reaction is



Answer: D

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27.

In the present graph, the area of circle A and B are 25 unit and 20 unit respectively work done will be in unit ?

A. -5

B. 5

C. 10

D. 45

Answer: A

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28. Iodine crystals are added to liquor ammonia and the brown precipitate so formed is separated, dried and spread on floor. On walking over the precipitate harmless explosion occurs releasing coloured gas. The ppt. and coloured gas are respectively



Answer: C



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29. For the reaction

$4A + B \rightarrow 2C + 2D$ which of the following statements is not

correct:

- A. The rate of disappearance of B is $\frac{1}{4}$ the rate of disappearance of A
- B. The rate of appearance of C is half the rate of disappearance of B
- C. The rate of formation of D is half the rate of consumption of A
- D. The rates of formation of C and D are equal

Answer: B



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30. If the salts M_2X , QY_2 and PZ_3 have the same solubilities (but $< 0.1M$) their, K_{sp} values are related as

A. $K_{sp}(M_2X) = K_{sp}(QY_2) > K_{sp}(PZ_3)$

B. $K_{sp}(M_2X) > K_{sp}(QY_2) = K_{sp}(PZ_3)$

C. $K_{sp}(M_2X) = K_{sp}(QY_2) < K_{sp}(PZ_3)$

D. $K_{sp}(M_2X) > K_{sp}(QY_2) > K_{sp}(PZ_3)$

Answer: A

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31. Which oxide of carbon is formed when malonic acid is warmed with P_2O_5 ?

A. CO

B. CO_2

C. $CO + CO_2$

D. C_3O_2

Answer: D

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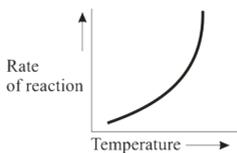
32. Sugar Present in DNA is

- A. D - Deoxyribofuranose
- B. D - Deoxyribofuranose
- C. D - ribofuranose
- D. D - Ribopyranose

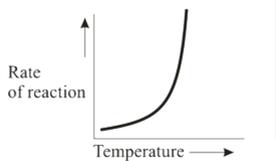
Answer: B

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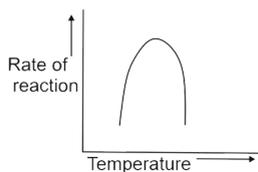
33. Which of the following graph is correct for the enzyme catalysis ?



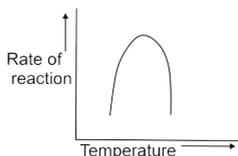
A.



B.



C.



D.

Answer: C

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34. One mole of a solute A is dissolved in a given volume of solvent.

The association of the solute take place as follows: $nA \rightleftharpoons A_n$

If α is the degree of association of A , the van't Hoff factor i is

expressed as:

A. $i = 1 - \alpha$

B. $i + 1 + \frac{\alpha}{n}$

C. $i = \frac{1 - \alpha + \frac{\alpha}{n}}{1}$

D. $i = 1$

Answer: C

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35. How many unit cell are present in a cubic-shaped ideal crystal of $NaCl$ of mass $1.0g$?

A. 2.57×10^{21}

B. 5.14×10^{21}

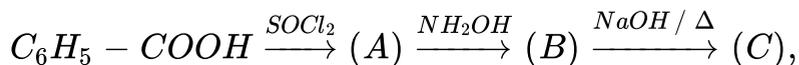
C. 1.28×10^{21}

D. 1.71×10^{21}

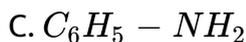
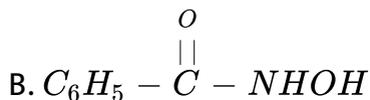
Answer: A

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36. In the given reaction sequence



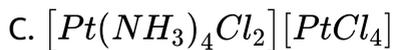
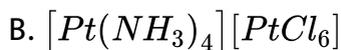
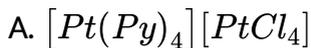
'C' will be



Answer: C

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37. Which of the following complex has same oxidation state of the central metal atom in the cationic and anionic part ?



D. In all the above

Answer: A

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38. Which of the following statement is true ?

A. Piezo - electricity is due to net dipole moment

B. Ferro - electricity is due to alignment of dipoles in same direction

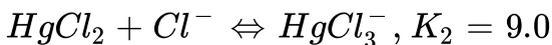
C. Piezo - electricity is due to heating polar crystals

D. All of the above

Answer: D

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39. The equilibrium constant for the disproportionation of $HgCl_2$ into $HgCl^+$ and $HgCl_3^-$ of Given



A. 27×10^6

B. 3.3×10^{-6}

C. 3.2×10^{-7}

D. 3×10^{-7}

Answer: D

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40. One gas bleaches the colour of flowers by reduction, while the other by oxidation, the two gases respectively are:

- A. CO and Cl_2
- B. H_2S and Br_2
- C. NH_3 and SO_3
- D. SO_2 and Cl_2

Answer: D

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41. Which one of the following is a heterogenous mixture ?

- A. Starch
- B. Dextrin
- C. Glycogen

D. Gum arabic

Answer: D

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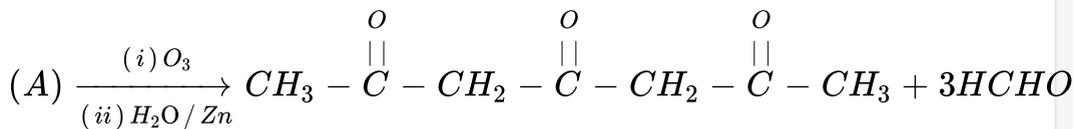
42. Which of the following statement is correct ?

- A. + I group stabilises a carbocation
- B. + I group stabilises a carbanion
- C. + I group destabilises a carbocation
- D. + I group stabilises a free radical

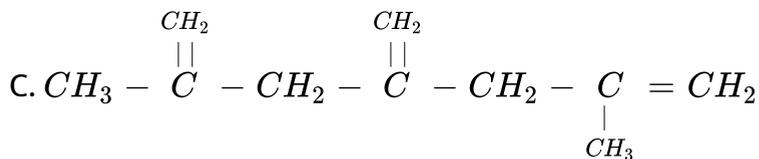
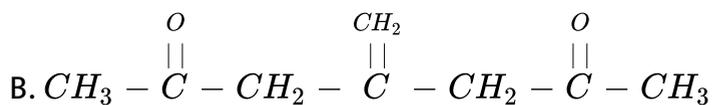
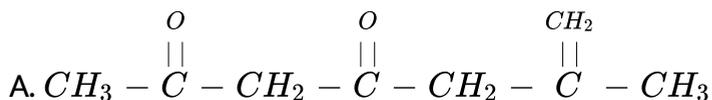
Answer: A

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43. Consider the following reaction



Compound 'A' will be



D. All of these

Answer: C

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44. An organic compound (A) with molecular formula C_7H_8O dissolves in NaOH and gives characteristic colour with $FeCl_3$. On

treatment with Br_3 , it gives a tribromo product $C_7H_5Br_3$. The compound is:

- A. o-cresol
- B. m-cresol
- C. p-cresol
- D. either of the three

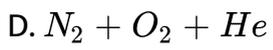
Answer: B



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45. Which mixture is lighter than humid air ?

- A. $N_2 + O_2 + SO_2$
- B. $N_2 + O_2 + CO_2$
- C. $N_2 + O_2 + C_2H_6$



Answer: D



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