



CHEMISTRY

NTA MOCK TESTS ENGLISH

NTA NEET SET 95

Chemistry

1. Which of the following will contain same number of atoms as 20g of calcium?

A. 24 g of Mg

B. 8 g of O - atoms

C. 12 g of Carbon

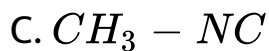
D. 16 g of O - atoms

Answer: B



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2. Which of the following does not have coordinate bonds ? .



Answer: A



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3. Sodium ethoxide has reacted with ethanoyl chloride.

The compound formed in the reaction is :

A. Diethyl ether

B. 2 - butanone

C. ethyl chloride

D. Ethyl ethanoate

Answer: D



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4. The mass number of atom whose nucleus has a radius of 5.6 Fermi ($R_0 = 1.40 \times 10^{-13} \text{ cm}$) is

A. 61

B. 37

C. 27

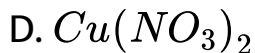
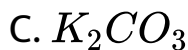
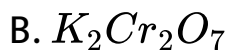
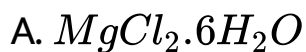
D. 64

Answer: D



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5. Which of the following compound on heating does not produce metal oxide?



Answer: C



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6. Which among the following is not an exact differential?

A. Q (dQ = heat absorbed)

B. U (dU = change in internal energy)

C. S (dS = entropy change)

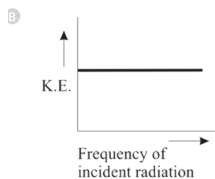
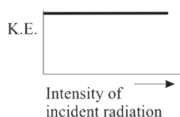
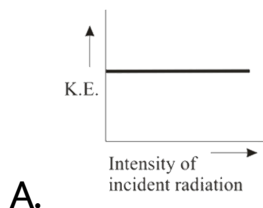
D. G (dG = Gibbs free energy change)

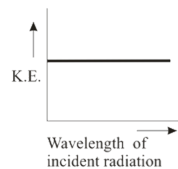
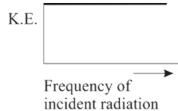
Answer: A



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7. Which of the following plot is correct about the kinetic energy of photoelectrons ?

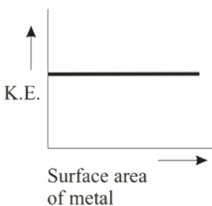




C.



D.

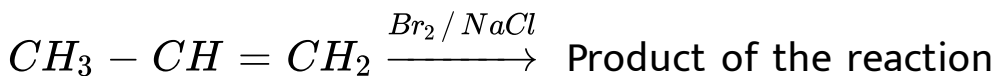


Answer: A



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8. Consider the following reaction



will be

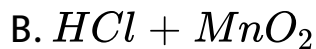
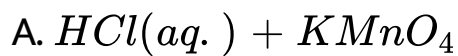
- A. Only 1,2 - dibromopropane
- B. Only 1- bromo -2- chloropropane
- C. Only -2- bromo -1- chloropropane
- D. Mixture of 1,2 dibromopropane and 1 - bromo -2- chloropropane

Answer: D



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9. Which of the following combination doesn't evolve Cl_2 gas?

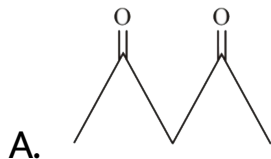


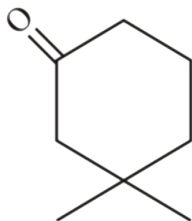
Answer: C



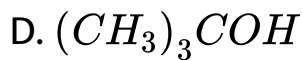
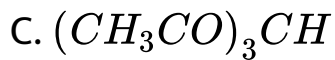
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10. Most acidic hydrogen is present in





B.



Answer: C



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11. Consider the following reaction $M + O_2 \rightarrow MO_2$

(M= alkali metal) (stable superoxide)

A. M can not be Li and Na

B. M can not be Cs and RB

C. M can not be Li and Rb

D. None of these

Answer: A



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12. Two isomeric compounds

$Cl - CH_2 - CH_2 - CH_2Cl$ and $CH_3 - CH_2 - CHCl_2$

can be distinguished by the use of

A. HOH / OH^-

B. Tollens reagent

C. Both HOH/OH^- and Tollens reagent

D. HOH/OH^- , Tollens reagent and ceric ammonium nitrate

Answer: D



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13. Which compound will liberate oxygen when reacts with ice cold water ?

A. Na_2O_2

B. KO_2

C. Na_2O

D. Cs_2O_2

Answer: B



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14. Which metal is protected by a layer of its own oxide?

A. Gold

B. Aluminium

C. Copper

D. Iron

Answer: B



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15. The pK_b value of ammonium hydroxide is 4.75. An aqueous solution of ammonium hydroxide is titrated with HCl. The pH of the ammonium hydroxide has been neutralized will be

A. 9.25

B. 8.25

C. 7.50

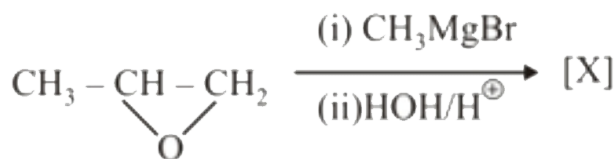
D. 4.75

Answer: A

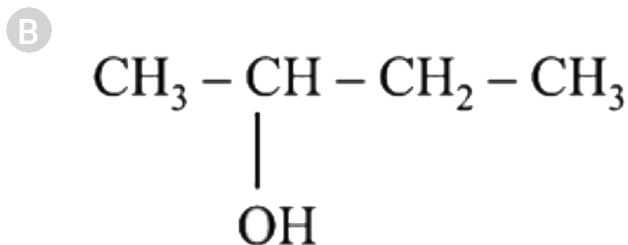
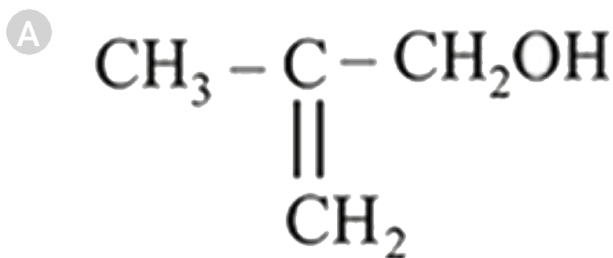


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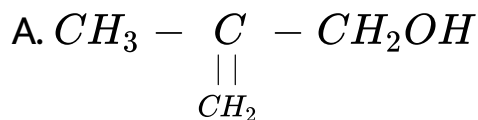
16. In the given reaction

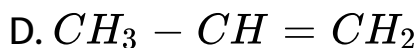
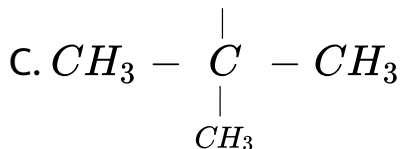
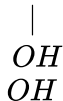
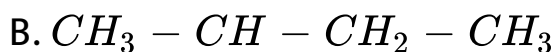


[X] will be:



[X] will be :





Answer: B



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17. Equilibrium constant for two complexes are

A: $K_4[Fe(CN)_6] 2.6 \times 10^{37}$ (for dissociation) B :

$K_3[Fe(CN)_6] 1.9 \times 10^{17}$ (for dissociation)

A. A and B are equally stable

- B. A is more stable than B
- C. B is more stable than A
- D. the predictable stability

Answer: C



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18. the incorrect statement with respect to

S_N1 and S_N2 mechanisms for alkyl halide is :

- A. A strong nucleophile is an aprotic solvent increases the rate or favours S_N2 reaction.

B. Competing reaction for S_N2 reaction is rearrangement

C. S_N1 reaction can be catalysed by some Lewis acid

D. A weak nucleophile and a protic solvent increases the rate of S_N1 reaction

Answer: B



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19. Which of the following metals can be extracted by smelting ?

A. aluminium

B. magnesium

C. iron

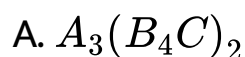
D. none of these

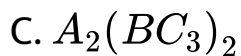
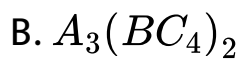
Answer: C



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20. A compound contains atom A, B and C . The oxidation number of A is +2, of B is +5 and C is -2. The possible formula of the compound is



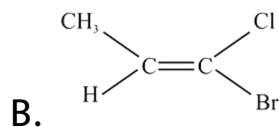
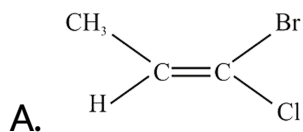


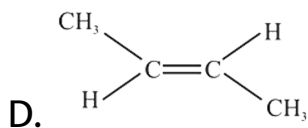
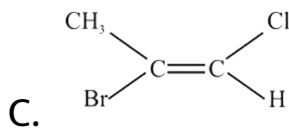
Answer: B



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21. Which one the following is an Z isomer ?





Answer: A

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22. Which of the following statement is correct ?

A. When $Z > 1$, real gases are difficult to compress

B. When $Z = 1$, real gases are easy to compress

C. When $Z = 1$, real gases are easily compressed

D. When $Z > 1$, real gases are easier to compress

Answer: A



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23. Co-ordination number (CN) of barium ion (Ba^{2+}) in BaF_2 is 8. What is the CN of F^- ion ?

A. 8

B. 4

C. 1

D. 2

Answer: B



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24. If a 6.84 % (*weight/volume*) solution of cane sugar (molecular weight=342) is isotonic with 1.52 % (*weight/volume*) solution of thiocarbamide, then the molecular weight of thiocarbamide is

A. 152

B. 60

C. 76

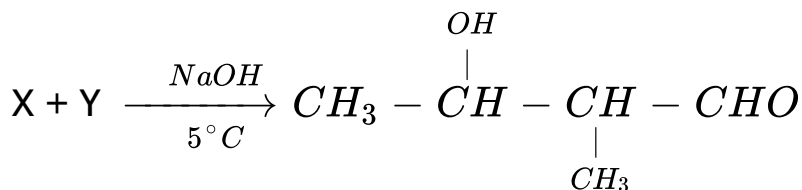
D. 180

Answer: C



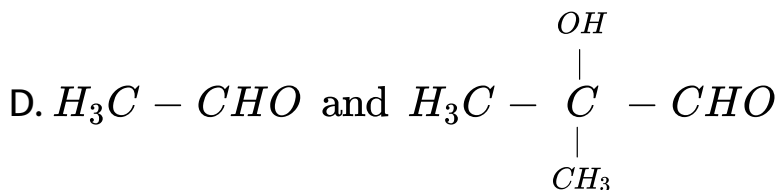
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25. In the reaction



(X) and (Y) Will respectively be :

A.

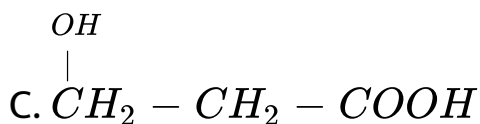
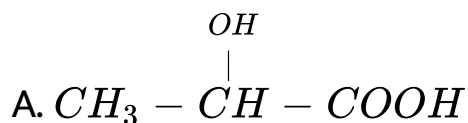
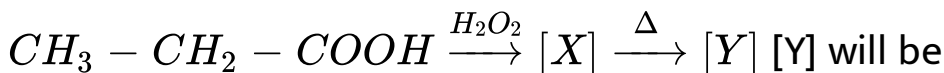


Answer: B



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26. In the reaction sequence



Answer: B



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27. Volume of 0.1 M $K_2Cr_2O_7$ required to oxidize 35 ml of 0.5 M $FeSO_4$ solution is

A. 29.2 ml

B. 145 ml

C. 175 ml

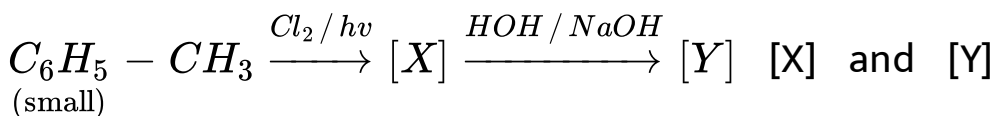
D. 58.9 ml

Answer: A

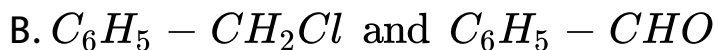


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28. In the reaction sequence



will respectively be :



Answer: D



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29. The ratio of the value of any colligative property for $K_4[Fe(CN)_6]$ solution to that of $Fe_4[Fe(CN)_6]_3$ (prussian blue,) solution is nearly

A. 0.62

B. 0.71

C. 1.4

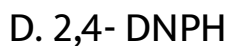
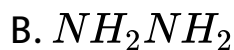
D. 1.2

Answer: B



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30. Which of the following reagents can be used for the test of carbonyl group in laboratory ?



Answer: D



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31. If the ionization enthalpy and electron gain enthalpy of an element are 275 and 86 kcal mol^{-1} respectively, then the electronegativity of the element on the Pauling scale is

A. 2.8

B. 0.0

C. 4.0

D. 2.6

Answer: A



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32. In the given polypeptide

Arg- Try -Ile-Asn Gly

C - terminus amino acid is

A. Gly

B. Arg

C. Try

D. Asn

Answer: A



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33. 0.73 g of organic compound on oxidation gave 1.32 g of carbon dioxide. The percentage of carbon in the given compound will be

A. 49.32

B. 59.32

C. 29.32

D. 98.64

Answer: A



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34. What will be the Freundlich's adsorption isotherm equation at high pressure?

A. $\frac{x}{m} = \frac{a}{b}$

B. $\frac{x}{m} = aP$

C. $\frac{x}{m} = \frac{1}{aP}$

D. $\frac{c}{m} = \frac{b}{a}$

Answer: A



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35. Which of the following oxoacids contains more than one S-S bonds ?

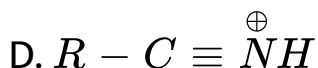
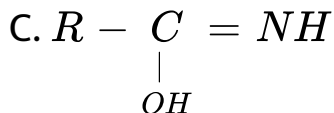
- A. Dithionic acid
- B. Thiosulphorus acid
- C. Polythionic acid
- D. Peroxodisulphuric acid

Answer: C



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36. Intermediate product of hydrolysis of cyanide is

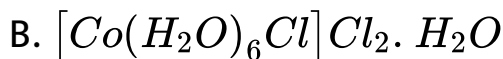
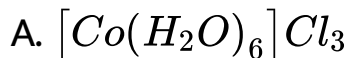


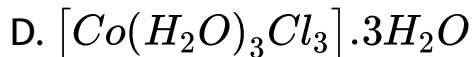
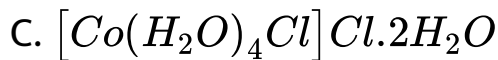
Answer: B



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37. Which of the following solutions has maximum freezing point depression at equimolal concentration ?



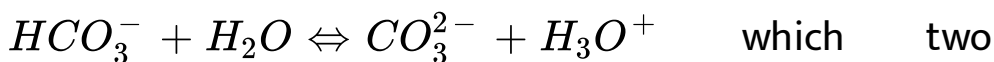


Answer: A

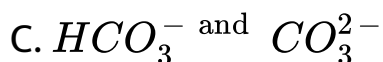
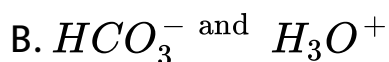
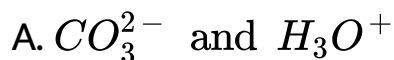


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38. In the following reaction



substances are Bronsted base ?



D. CO_3^{2-} and H_2O

Answer: D



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39. For a chemical reaction,
 $m_1A + m_2B \rightarrow n_1C + n_2D$ The ratio of rate of disappearance of A to that of appearance of C is

A. m_1 / m_2

B. m_2 / m_1

C. n_1 / m_1

D. m_1 / n_1

Answer: D



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40. Which of the following is correct order of σ - bond strength ?

I. 2s-2s

II. 2s-2p

III. 2p-2p

IV. 3s-3s

A. $I > II > III > IV$

B. $III > II > I > IV$

C. $IV > I > II > III$

D. $III > I > II > IV$

Answer: B



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41. What is the shape of the IBr_2^- ion ?

A. Linear

B. Bent shape with bond angle of about 90°

C. Bent shape with bond angle of about 109°

D. Bent shape with bond angle of about 120°

Answer: A



42. Two different first order reactions have rate constants k_1 and k_2 at T_1 ($k_1 > k_2$). If temperature is increased from T_1 to T_2 , then new constants becomes k_3 and k_4 respectively. Which among the following relations is correct?

A. $k_1 > k_2 = k_3 = k_4$

B. $k_1 < k_3$ and $k_2 < k_4$

C. $k_1 = k_3 = k_4$

D. $k_1 > k_2 > k_3 > k_4$

Answer: B



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43. What is not applicable to ozone ?

- A. It is a bent molecule with bond angle approximately 117°
- B. It has four lone pairs of electrons in one of its Lewis formula
- C. The two O-O bond lengths are equal
- D. It is an allotrope of oxygen.

Answer: B



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44. Match the list - I with List - II

| List (Electrode) | List - II (Type) |
|------------------|---------------------|
| 1. Calomel | <i>P.</i> Reference |
| 2. Glass | <i>Q.</i> Redox |
| 3. Hydrogen | <i>R.</i> Membrane |
| 4. Quinhydrone | <i>S.</i> Gas |

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

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

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

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

Answer: A



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45. Which of the following combination does not liberated NH_3 gas?

A. Heating of NH_4ClO_4

B. Heating of NH_4Cl

C. $(NH_4)_2CO_3 + NaOH$

D. $Li_3N + H_2O$

Answer: A



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