



# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### 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

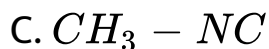
D. 16 g of O - atoms

**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 that is produced in this 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

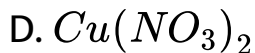
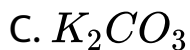
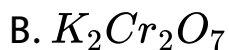
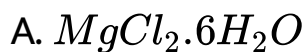
D. 64

**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)

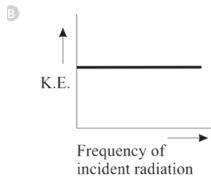
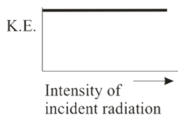
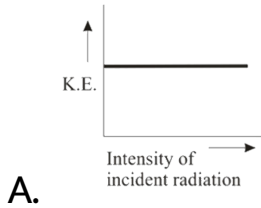
D.  $G$  ( $dG$  = Gibbs free energy change)

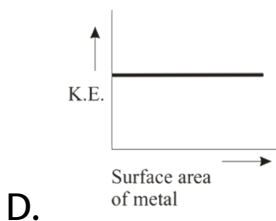
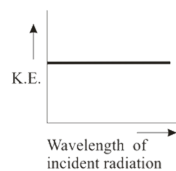
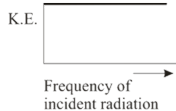
**Answer: A**



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

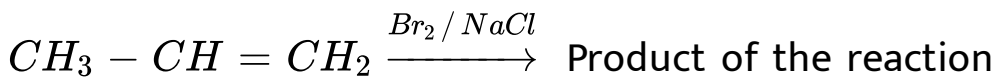




**Answer: A**

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8. Consider the following reaction





will be

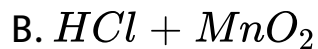
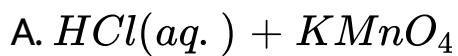
- A. Only 1,2 - dibromopropane
- B. Only 1- bromo -2- chloropropane
- C. Only -2- bromo -1- chloropropane
- D. Mixture of 1,2 dibromopropane and 1 - bromo -2- chloropropane

**Answer: D**



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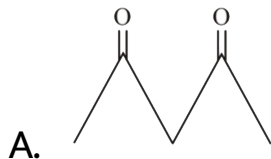
**9.** Which of the following combination does not evolve  $Cl_2$  gas?

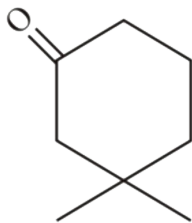


**Answer: C**

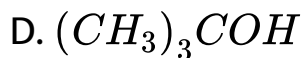
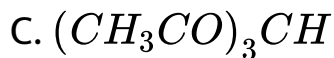
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10. Most acidic hydrogen is present in





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 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

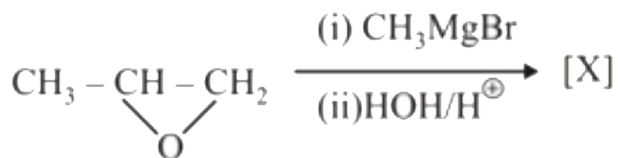
D. 4.75

**Answer: A**

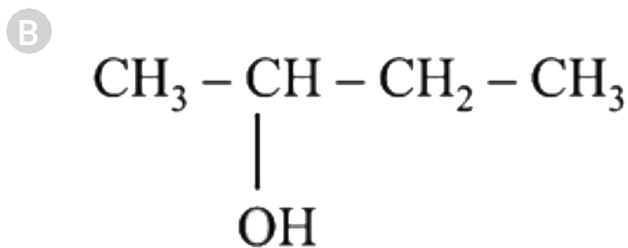
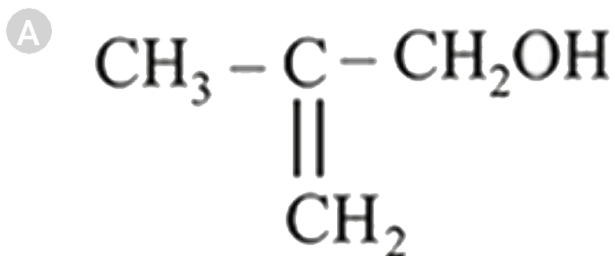


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16. In the given reaction

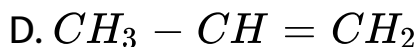
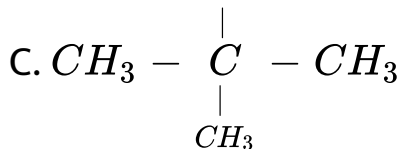
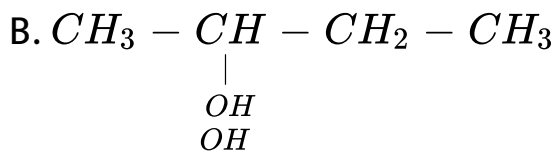
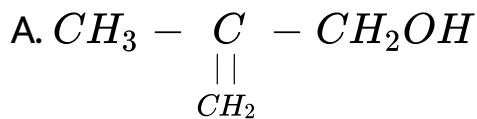


[X] will be:



[X] will be :





**Answer: B**



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17. Equilibrium constant for two complexes are

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

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

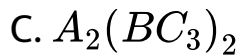
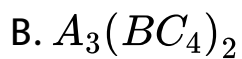
D. none of these

**Answer: C**

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20. A compound contains three elements  $A$ ,  $B$  and  $C$ , if the oxidation number of  $A = +2$ ,  $B = +5$  and  $C = -2$  then possible formula of the compound is

A.  $A_3(B_4C)_2$

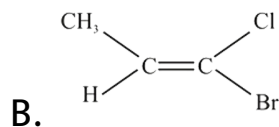
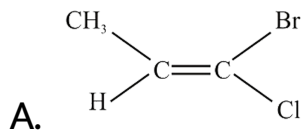


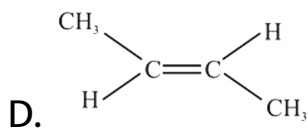
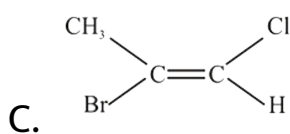
**Answer: B**



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**21. Which one of 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 % (wt,vol.) solution of cane sugar (mol. Wt. = 342) is isotonic with 1.52 % (wt. / vol. ) solution of thiocarbamide, then the molecular weight of thiocarbamide is

A. 152

B. 60

C. 76

D. 180

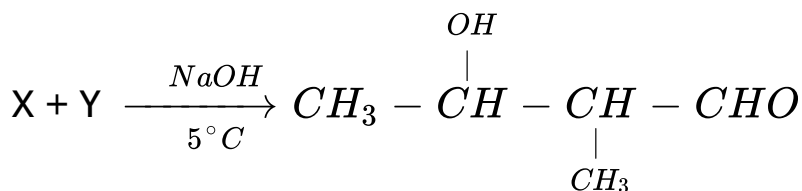
**Answer: C**



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25. In the reaction



(X) and (Y) Will respectively be :

A.



B.  $H_3C - CHO$  and  $CH_3 - CH_2 - CHO$

C.  $H_3C - CHO$  and  $CH_3 - CHO$

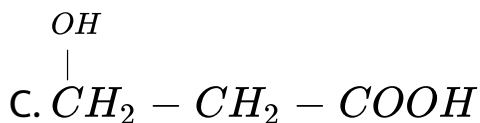
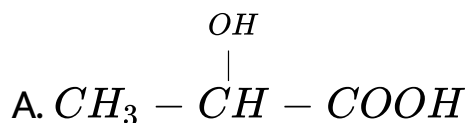
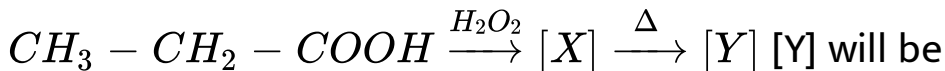
D.  $H_3C - CHO$  and  $H_3C - \overset{\begin{matrix} OH \\ | \end{matrix}}{C} - \underset{\begin{matrix} | \\ CH_3 \end{matrix}}{CHO}$

Answer: B



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26. In the reaction sequence



D. Lactide

**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

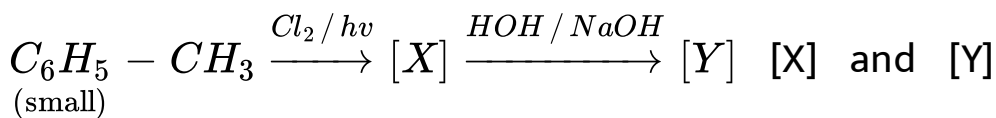
D. 58.9 ml

**Answer: A**

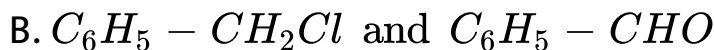


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28. In the reaction sequence



will respectively be :



**Answer: D**



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29. The ratio of the value of any colligative property for  $K_4[Fe(CN)_6]$  to that of  $Fe_4[Fe(CN)_6]_3$  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 ?

A.  $NH_2OH$

B.  $NH_2NH_2$

C.  $NaSO_3H$

D. 2,4- DNPH

**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 is the equation form of Langmuir adsorption isotherm under 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 ?

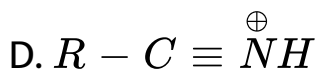
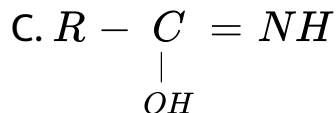
- A. Dithionic acid
- B. Thiosulphorus acid
- C. Polythionic acid
- D. Peroxodisulphuric acid

**Answer: C**



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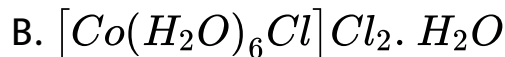
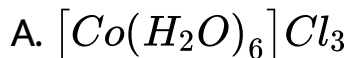
36. Intermediate product of hydrolysis of cyanide is

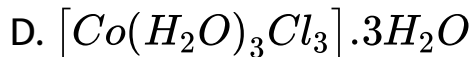
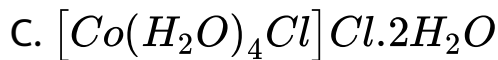


**Answer: B**

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



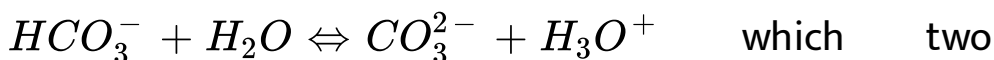


**Answer: A**

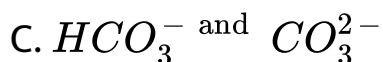
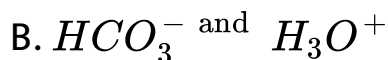


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**38.** In the following reaction



substances are Bronsted base ?



D.  $\text{CO}_3^{2-}$  and  $\text{H}_2\text{O}$

**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  $\sigma$  - 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  $90^\circ$

C. Bent shape with bond angle of about  $109^\circ$

D. Bent shape with bond angle of about  $120^\circ$

**Answer: A**





42. Two different first order reaction 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 become  $k_3$  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  $117^\circ$
- 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 liberate  $NH_3$  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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