



# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### NTA NEET SET 63

#### Chemistry

1. Food preservatives prevent spoilage of food due to microbial growth. The commonly used preservatives are :

A. Table salt and sugar

B. Vegetable oils and sodium benzoate



C. Salts of sorbic acid and propionic acid.

D. All of these

**Answer: D**



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2. Number of protons, neutrons and electrons in the element  ${}_{89}^{231}Y$  is.

A. 89,89,242

B. 89,71,89

C. 89,142,89

D. 89,231,89

**Answer: C**



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**3.** Calculate the mass of  $BaCO_3$  produced when excess  $CO_2$  is bubbled through a solution containing 0.205 moles of  $Ba(OH)_2$ .

A. 40.5g

B. 48.5g

C. 4.5g

D. 60.5g

**Answer: A**



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4. Calculate the octane number of gasoline fuel, which contains 25 % n - heptane and 75 % is iso - octane.

A. 25

B. 50

C. 75

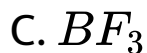
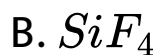
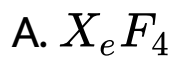
D. 100

**Answer: C**



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5. Which of the given compound have a permanent dipole moment ?

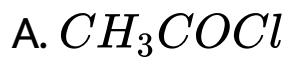


**Answer: D**



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**6. What is the product when acetylene reacts with HCN**



**Answer: C**



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7. Which element in the given below does not show variable valency ?

A. Zn

B. Cu

C. Ni

D. Mn

**Answer: A**



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**8.** Which of the following pairs is an example of a positive deviation from Raoult's law ?



A. Water - hydrochloric acid

B. Water - nitric acid

C. Benzene - methanol

D. Acetone - chloroform

**Answer: C**



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**9.** In Birkeland-Eyde process, the raw material used is

A. Air

B.  $NH_3$

C.  $NO_2$

D.  $HNO_3$

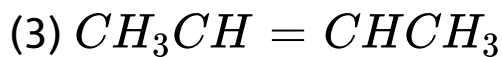
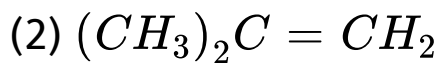
**Answer: A**



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**10.** The order of increasing reactivity of the following compounds towards HCl will be

(1)  $CH_2 = CH_2$



A.  $1 < 2 < 3$

B.  $1 < 3 < 2$

C.  $3 < 2 < 1$

D.  $2 < 1 < 3$

**Answer: B**



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11. The ratio of density of a gas A and gas B is three. If the molecular mass of A is  $M$ , then molecular mass of B is

A.  $\sqrt{3}M$

B.  $M / \sqrt{3}$

C.  $M / 3$

D.  $3M$

**Answer: C**



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12. Which of the following is least soluble in water ?

A. AgCl

B. AgBr

C. AgI

D. AgF

**Answer: C**



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13. A sample of chloroform before using as an anaesthetic is tested by :

A. Ammoniacal  $Cu_2Cl_2$

B. Fehling solution

C.  $AgNO_3$  solution

D. Adding Ag to the solution after boiling with alcoholic KOH solution

**Answer: C**



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14. Calculate the amount of  $^{128}\text{I}$  ( $t_{1/2} = 25 \text{ min}$ ) left after 75 minutes.

A.  $\frac{1}{4}$

B.  $\frac{1}{6}$

C.  $\frac{1}{8}$

D.  $\frac{1}{9}$

**Answer: C**



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15.  $CH_3CH = CHCHO$  is oxidised to  $CH_3CH = CHCOOH$  using :

- A. Selenium dioxide
- B.  $MnO_2$
- C. Alkaline Tollen's reagent
- D. All of these

**Answer: C**



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16. What product is formed when  $H_2S$  gas is passed through acidified  $KMnO_4$  solution ?

A.  $MnO_2$

B. S

C.  $K_2SO_3$

D.  $K_2S$

**Answer: B**



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17. Which reagent is used to differentiate between aldehyde and ketone ?

A. Fehling's solution

B. Tollen's reagent

C. Schiff's reagent

D. All of these

**Answer: D**



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**18.** In a chemical reaction equilibrium is established when

A. Concentration of reactants and products are equal

B. Opposing reaction ceases

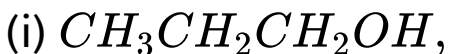
C. Velocity of oppsing reaction is the same as that of forward reaction

D. When Reaction heat becomes negative

**Answer: C**



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**19. Three alcohols**

were treated separately with Lucas reagent (Conc.  $HCl + ZnCl_2$ ). What results do you expect at room temperature.

A. (i) reacts in about 5 minutes, (ii) reacts in about 15 minutes and (iii) not at all

B. (iii) reacts immediately , (ii) reacts in about 5 minutes and (i) not at all

C. (ii) and (iii) react immediately and (i) in about 5 minutes

D. (i) reacts immediately , (ii) reacts in about 5 minutes and (iii) not at all

**Answer: B**



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20. For the weak electrolyte , their degree of dissociation increase

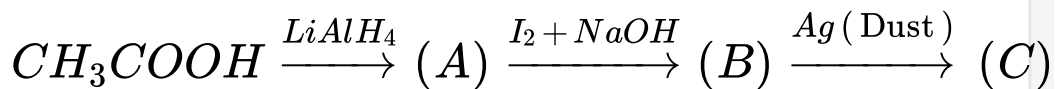
- A. One increasing dilution
- B. On decreasing dilution
- C. On increasing pressure
- D. None of these

**Answer: A**

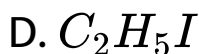
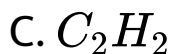
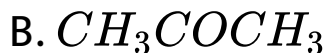
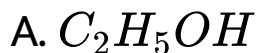


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21. In the reaction



, the final product C is:-

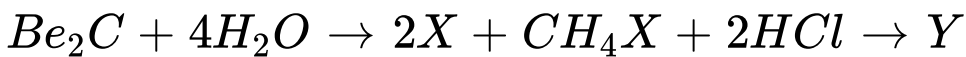


**Answer: C**



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22.



'X' and 'Y' formed in the above two reactions are

-

A.  $\text{BeCO}_3$  and  $\text{Be}(\text{OH})_2$ , respectively

B.  $\text{Be}(\text{OH})_2$  and  $\text{BeCl}_2$  respectively

C.  $\text{Be}(\text{OH})_2$  and  $[\text{Be}(\text{OH})_4]\text{Cl}_2$

respectively

D.  $[\text{Be}(\text{OH})_4]^{2-}$  and  $\text{BeCl}_2$ , respectively

**Answer: B**





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23. The set of four quantum number not possible from the following .

A.  $n = 3, l = 0, m = 0, s = -\frac{1}{2}$

B.  $n = 3, l = 2, m = 0, s = -\frac{1}{2}$

C.  $n = 3, l = 3, m = -3, s = -\frac{1}{2}$

D.  $n = 3, l = 2, m = -2, s = -\frac{1}{2}$

Answer: C



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24. A metal  $M$  readily forms its sulphate  $MSO_4$  which is water soluble. It forms its oxide  $MO$  which becomes inert on heating. It forms its insoluble hydroxide  $M(OH)_2$  which is soluble in  $NaOH$  solution. Then  $M$  is

A. Mg

B. Ba

C. Ca

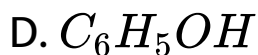
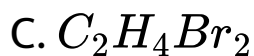
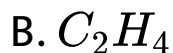
D. Be

Answer: D



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25. In which compound the C – H bond distance is longest ?



**Answer: C**



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**26.** The elevation in boiling point of a solution of 13.44 g of  $CuCl_2$  1 kg of water will be \_\_\_\_\_.

(Molecular mass of

$CuCl_2 = 134.4$  and  $K_b = 0.52\text{km}^{-1}$ )

A. 0.05

B. 0.16

C. 0.1

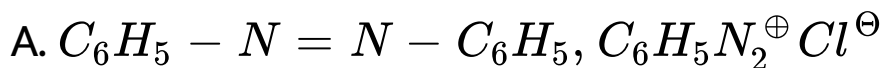
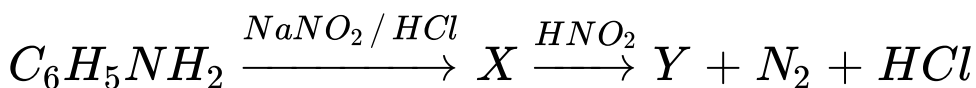
D. 0.2

**Answer: B**

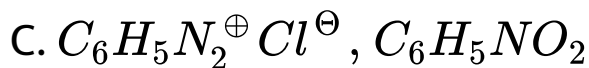
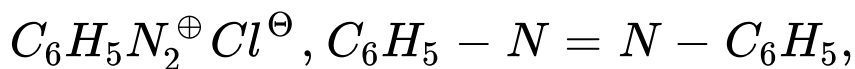


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**27.** In the series of reaction X and Y are respectively \_\_\_\_\_ are



B.

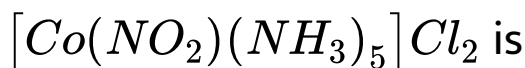


**Answer: C**



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**28.** The IUPAC name of the complex



- A. Pentamminenitrocobalt (III) chloride
- B. Pentamminenitrosocobalt (III) chloride
- C. Pentamminenitraetcobalt (III) chloride
- D. None of these

**Answer: A**



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**29.** Iodine crystals are placed in which category among the following

- A. Ionic crystal
- B. Metallic crystal
- C. Molecular crystal
- D. Covalent crystal

**Answer: C**



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**30.** For a reactions  $A + B \rightarrow$  product ,it was found that rate of reaction increases four times if concentration of 'A' is doubled. But the rate of



reaction remains unaffected, if concentration of 'B' is doubled . Hence , the rate law for the reaction is

A. rate =  $k[A][B]$

B. rate =  $k[A]^2$

C. rate =  $k[A]^2[B]^1$

D. rate =  $k[A]^2[B]^2$

**Answer: B**



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**31.** Which statement is incorrect among the following ?

A. Calamine and siderite are carbonates

B. Argentite and cuprite are oxides

C. Zinc blende and pyrites are sulphides

D. Malachite and azurite are ores of copper

**Answer: B**



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32. Saturated solution of  $KNO_3$  is used to make 'salt - bridge' because ,

A. Velocity of  $K^+$  is greater than that of  $NO_3^-$

B. Velocities of both  $K^+$  and  $NO_3^-$  are nearly the same

C. Velocity of  $NO_3^-$  is greater than that of  $K^+$

D.  $KNO_3$  is highly soluble in water

**Answer: C**



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**33.** The monomer for Teflon polymer is

A. Monofluoroethene

B. Difluoroethene

C. Trifluoroethene

D. Tetrafluoroethene

**Answer: D**



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34. The dissociation constant of a weak monoprotic acid, which is 0.01 % ionised in 1 .00M solution , is

A.  $1 \times 10^{-8}$

B.  $1 \times 10^{-4}$

C.  $1 \times 10^{-6}$

D.  $10^{-5}$

**Answer: A**



35. What is isoelectric point?

A. Specific temperature

B. Suitable concentration of amino acid

C. Hydrogen ion concentration that does not allow migration of amino acid under electric field

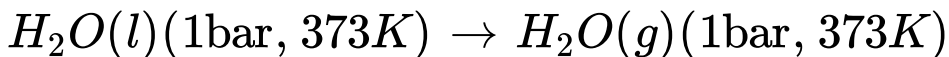
D. Melting point of an amino acid under the influence of electric field

**Answer: C**



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**36.** For the process



the correct set of thermodynamic parameters is

A.  $\Delta G = 0, \Delta S = +ve$

B.  $\Delta G = 0, \Delta S = -ve$

C.  $\Delta G = 0, \Delta G = -ve$

D.  $\Delta G = -ve, \Delta S = 0$

**Answer: A**



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**37. Which of the following is a  $\pi$  – complex**

A. Trimethyl aluminum

B. Ferrocene

C. Diethyl zinc

D. Nickel carbonyl

**Answer: B**





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38. Substances used in bringing down the body temperature in high fevers are called :

- A. Pyretics
- B. Antipyretics
- C. Antibiotics
- D. Antiseptics

**Answer: B**



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39. Under normal conditions which of the given electronic configuration is able to form a positive ion?

A. Br

B. Cl

C. Mg

D. None of these

**Answer: C**



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**40.** Which of the following type of catalysis can be explained by the adsorption theory ?

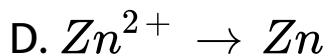
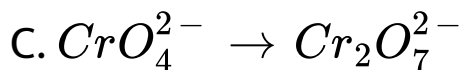
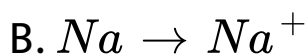
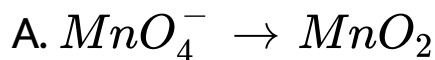
- A. Homogeneous catalysis
- B. Acid base catalysis
- C. Heterogeneous catalysis
- D. Enzyme catalysis

**Answer: C**



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41. Which one of the following reactions does not involve either oxidation or reduction ?



**Answer: C**



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42. For the given cell reaction of an electrochemical cell, the change in free energy at a given temperature is a function of

$$\text{Cu}^{2+} (C_1\text{aq}) + \text{Zn}(s) \rightarrow \text{Zn}^{2+} (C_2\text{aq}) + \text{Cu}(s)$$

- A.  $\ln (C_1)$
- B.  $\ln (C_2)$
- C.  $\ln (C_1 + C_2)$
- D.  $\ln (C_2 / C_1)$

**Answer: D**



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43. Which is true for the temperature coefficient of a reaction ?

A. ific reaction rate at  $25^{\circ}C$

B. Rate of the reaction at  $100^{\circ}C$

C. Ratio of the rate constants at temperature  $35^{\circ}C$  and  $25^{\circ}C$

D. Ratio of the rate constants at two temperature differing by  $1^{\circ}C$

**Answer: C**



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44. The change in the internal energy of a substance

A. Increase with increase in temperature

B. Decrease with increase in temperature

C. Can be calculated the relation  $E = mc^2$

D. Remains unaffected with change in temperature

**Answer: A**



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45. The gaseous mixture used by deep sea divers for respiration is

- A. Oxygen and helium
- B. Oxygen and argon
- C. Oxygen and hydrogen
- D. Oxygen and nitrogen

**Answer: A**



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