



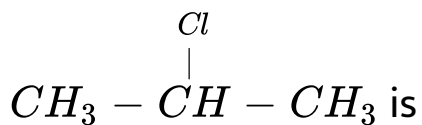
# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### NTA NEET SET 91

#### Chemistry

1. The IUPAC name of



A. 2 - chloropropane

B. Chloropropane

C. 1 - chloropropane

D. 2 - chlorobutane

**Answer: A**



**Watch Video Solution**

2. Identify the correct statement

A. Lead forms compounds in +2 oxidation state  
due to inert pair effect

B. All halogens form only negative oxidation states

C. Catenation property increases from boron to oxygen

D. Oxygen's oxidation state is - 1 in ozonides

**Answer: A**



**Watch Video Solution**

**3. Rank the following compounds in increasing order of their acidity:**

1. 3 - fluorobutanoic acid

2. 3 - chlorobutanoic acid

3. 2 - fluobutanoic acid

4. Butanoic acid

5. 4 - chlorobutanoic acid.

A.  $3 < 1 < 2 < 4 < 5$

B.  $4 < 3 < 1 < 2 < 5$

C.  $5 < 2 < 1 < 3 < 4$

D.  $4 < 5 < 2 < 1 < 3$

**Answer: D**



**Watch Video Solution**

4. Na and Mg crystallize in BCC and FCC type crystal respectively, then the number of atoms of Na and Mg present in the unit cell of their respective crystal is:

- A. 4 and 2
- B. 9 and 14
- C. 14 and 9
- D. 2 and 4

**Answer: D**



**Watch Video Solution**

5. Which acid makes iron passive?

- A. Sulphuric acid
- B. Fuming nitric acid
- C. Hydrofluoric acid
- D. Hydrochloric acid

**Answer: B**



**Watch Video Solution**

6. An element X which occurs in the second short period has an outer electronic structure  $s^2p^1$ . What

are the formula and acid -base character of its oxides

?

A.  $XO_3$  , basic

B.  $X_2O_3$  , basic

C.  $X_2O_3$  , amphoteric

D.  $XO_2$  , acidic

**Answer: C**



**Watch Video Solution**

7. The products obtained when benzyl phenyl ether is heated with HI in the mole ratio 1 : 1 are

1. Phenol
2. Benzyl alcohol
3. Benzyl iodide
4. Iodobenzene

A. 1 and 3 only

B. 3 and 4 only

C. 1 and 4 only

D. 2 and 4 only

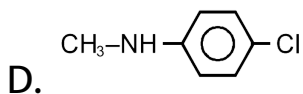
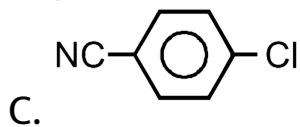
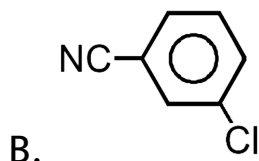
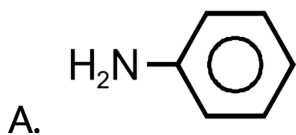
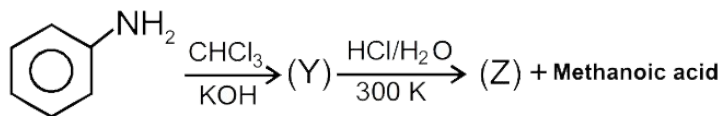
**Answer: A**



**Watch Video Solution**



## 8. Identify (Z)



**Answer: A**



**Watch Video Solution**

9. Phenol reacts with bromine in carbon disulphide at low temperature to give

- A. m - bromophenol
- B. o - and p - bromophenol
- C. p - bromophenol
- D. 2,4,6 - tribromophenol

**Answer: B**



**Watch Video Solution**

10. State the equation corresponding to 8g of  $O_2$  is

A.  $pV = 8 RT$

B.  $pV = RT$

C.  $pV = 0.25 RT$

D.  $pV = 0.5 RT$

**Answer: C**



**Watch Video Solution**

11. The process of heating the ore strongly in excess of air so that the volatile impurities are removed and

the ore is changed to oxide is known as

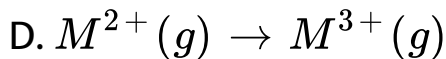
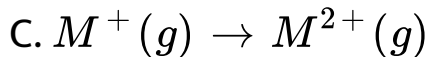
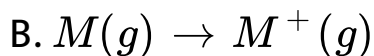
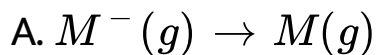
- A. Calcination
- B. Roasting
- C. Froth floatation
- D. Leaching

**Answer: B**



**Watch Video Solution**

**12.** Which of the following transitions involves maximum amount of energy?



**Answer: D**

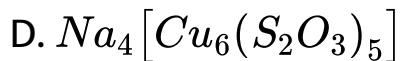
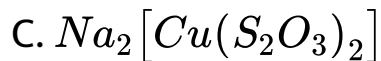
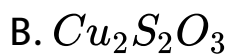


**Watch Video Solution**

**13.** An excess of  $Na_2S_2O_3$  react with aqueous  $CuSO_4$

to give



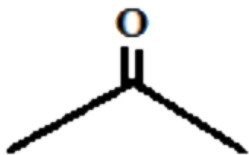


**Answer: D**

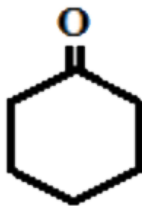


**Watch Video Solution**

**14.** Arrange in the order of stability of enol form of the compounds :



i.



ii.

A.  $i > ii$

B.  $ii > i$

C.  $i = ii$

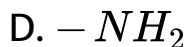
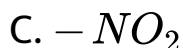
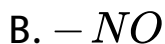
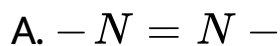
D. None

**Answer: B**



**Watch Video Solution**

15. Which of the following is not a chromophore?



**Answer: D**



**Watch Video Solution**

16. If one strand of DNA has the sequence ATCGTATG ,  
the sequence in the complementary strand would be



A. TAGCTTAC

B. TCACATAC

C. TAGCATAC

D. TACGATAC

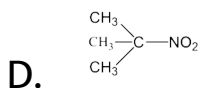
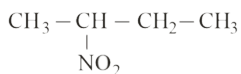
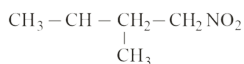
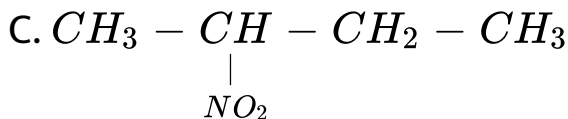
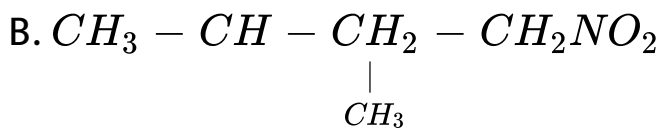
**Answer: C**



**Watch Video Solution**

17. Which of the following nitoalkane will not show tautomerism ?





**Answer: D**

 **Watch Video Solution**

**18.** Compound X is highly volatile and insoluble in water. Boding in X is

A. Ionic

B. Covalent

C. Polar covalent

D. Coordinate

**Answer: B**



**Watch Video Solution**

**19.** Ammonia forms the complex  $[Cu(NH_3)_4]^{2+}$  with copper ions in alkaline solution but not in acid solution. The reasons for it is:

A. In acidic solution , hydration protects  $Cu^{2+}$  ions

B. In acidic solution , proton co - ordinates with ammonia molecules to form  $NH_4^+$  ions and  $NH_3$  molecules are not available

C. In alkaline solutions insoluble  $Cu(OH)_2$  is precipitated which is soluble in excess of any alkali

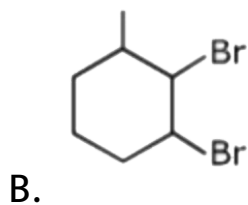
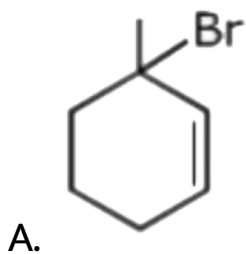
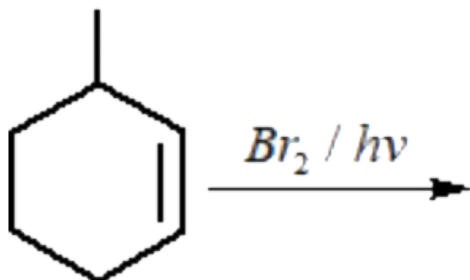
D. Copper hydroxide is amphoteric substance

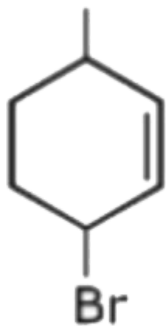
**Answer: B**



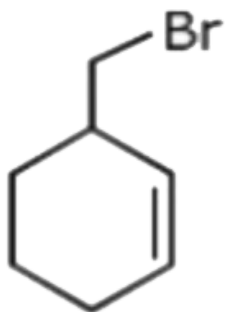
**Watch Video Solution**

20. The major product of the following reaction is :





C.



D.

**Answer: A**



**Watch Video Solution**

21. In a reversible process,

$$\Delta S_{sys} + \Delta S_{surr} \text{ is}$$

A.  $> 0$

B.  $< 0$

C.  $\geq 0$

D.  $= 0$

**Answer: D**



**Watch Video Solution**

22. The work function ( $\phi$ ) of some metals is listed below . The number of metals which will show photoelectric effect when light of 300 nm wavelength falls on the metal is :

Metal	Li	Na	K	Mg	Cu	Ag	Fe	Pt	W
$\phi$ (eV)	2.4	2.3	2.2	3.7	4.8	4.3	4.7	6.3	4.75

A. 2

B. 4

C. 6

D. 8

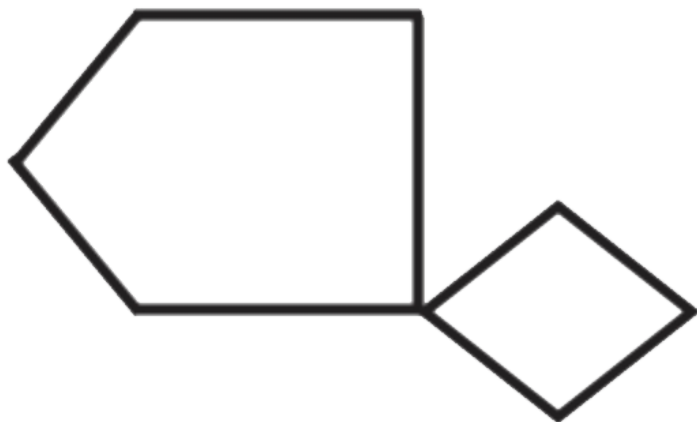
**Answer: B**



Watch Video Solution



23. What is the name of the compound ?



A. Spiro [3.4] octane

B. Spiro [2.5] octane

C. Spiro [3.5] octane

D. None of these

**Answer: A**



**Watch Video Solution**

**24.** Among the following the region of atmosphere containing ozone

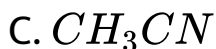
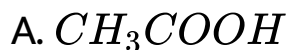
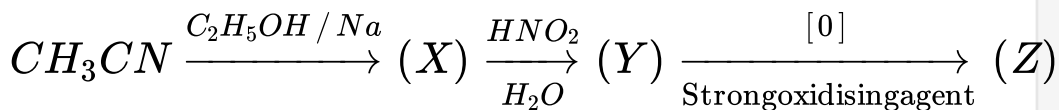
- A. Troposphere
- B. Thermosphere
- C. Mesosphere
- D. Stratosphere

**Answer: D**



**Watch Video Solution**

25. Identify product (Z) in the following sequence of chemical reactions:



Answer: A



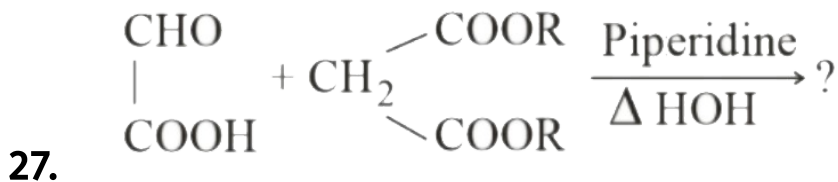
26. which gas will be adsorbed on a solid to greater extent ?

- A. Having nonpolar molecule
- B. Having highest critical temperature
- C. Having lowest critical temperature
- D. Having lowest critical pressure

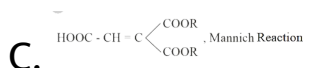
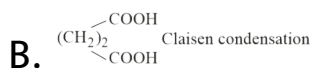
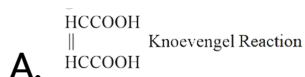
**Answer: B**



**Watch Video Solution**



Find product and the name of the reaction is



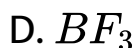
D. None of the above

**Answer: A**



**Watch Video Solution**

28. Which one of the following molecules is planar?



**Answer: D**



**Watch Video Solution**

29. The type of bond that is most important in maintaining secondary structure of a protein is

A. Disulphide bridges

B. Hydrogen bonding within the backbone

C. Hydrogen bonding between R group

D. Salt bridges

**Answer: B**



**Watch Video Solution**

**30.** Iodimetric titrations are usually performed in neutral or mildly alkaline ( $\text{pH} = 8$ ) or weakly acidic solutions. Which statement is not valid for this observation ?

- A. In strong alkaline solution,  $I_2$  disproportionate to  $I^-$  and  $IO^-$
- B. In strong acidic solutions, starch used to detect the end point tends to hydrolyse or decompose
- C.  $I^-$  produced during titration tends to be oxidized by dissolved oxygen in acidic medium
- D. Reducing power of reducing agent is increased in strong acidic medium

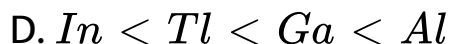
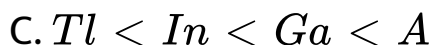
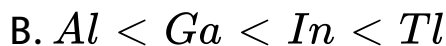
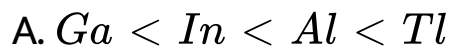
**Answer: D**



**Watch Video Solution**



31. The stability of +1 oxidation state among Al, Ga, In and Tl increases in the sequence :



**Answer: B**



**Watch Video Solution**

**32.** Dissolution of 1.5 g of a non-volatile solute (*mol. wt.* = 60) in 250 g of a solvent reduces its freezing point by  $0.01^{\circ}C$ . Find the molal depression constant of the solvent.

A. 0.01

B. 0.001

C. 0.0001

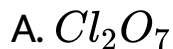
D. 0.1

**Answer: D**



**Watch Video Solution**

33. In which of the following, oxidation number of chloride is +5 ?

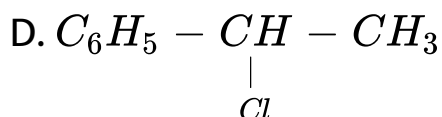
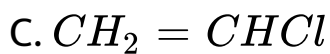
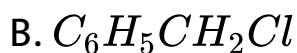


**Answer: B**



**Watch Video Solution**

34. Which of the following is most easily hydrolysed with aqueous KOH solution ?



Answer: D



Watch Video Solution

35. One gram equimolecular mixture of  $Na_2CO_3$  and  $NaHCO_3$  is reacted with 0.1 N HCl. The milliliters of 0.1 N HCl required to react completely with the above mixture is :

A. 15.78 mL

B. 157.8 mL

C. 198.4 mL

D. 308 mL

**Answer: D**



**Watch Video Solution**

36. Which is the weakest among the following types of bonds

A. Ionic bond

B. Covalent bond

C. Metallic bond

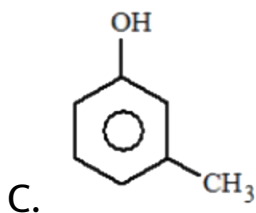
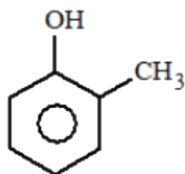
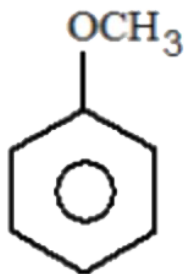
D. Hydrogen bond

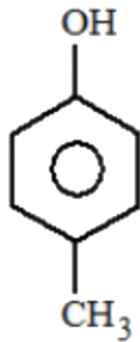
**Answer: D**



**Watch Video Solution**

37. Compound A ( $C_7H_8O$ ) is insoluble in water, dilute HCl & aqueous  $NaHCO_3$ , but it dissolves in dilute NaOH. When A is treated with  $Br_2$  water it is converted into a compound  $C_7H_5OBr_3$  rapidly. The structure of A is:

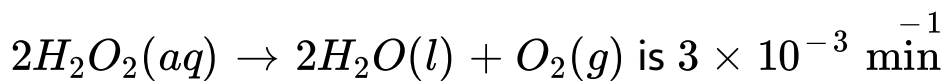




Answer: C

 [Watch Video Solution](#)

38. The rate constant of the reaction



At what concentration of  $H_2O_2$ , the rate of the reaction will be  $2 \times 10^{-4} M s^{-1}$  ?

A.  $6.67 \times 10^{-3} M$



B. 2 M

C. 4 M

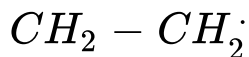
D. 0.08 M

**Answer: C**

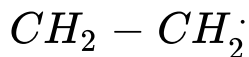


**Watch Video Solution**

**39.** The most stable radical among the following is :

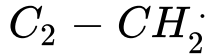


A. |

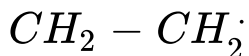


B. |





C. |



D. |



**Answer: D**

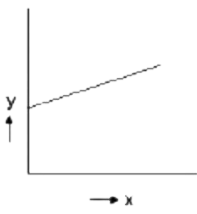


**Watch Video Solution**

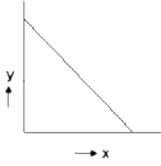
**40.** Which one of the following is the correct plot of

$\Lambda_m$  (in  $s\ cm^2\ mol^{-1}$ ) and  $\sqrt{c}$  (in  $\left(\frac{mol}{L}\right)^{\frac{1}{2}}$ ) for

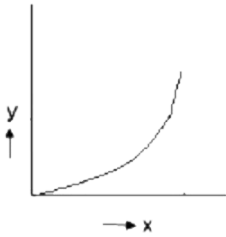
KCl solution ? ( $y = \Lambda_m$ ,  $x = \sqrt{c}$ )



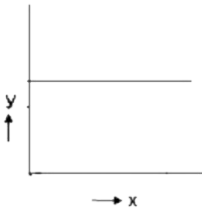
A.



B.



C.



D.

**Answer: B**



**Watch Video Solution**

41. At constant temperature, the equilibrium constant ( $K_p$ ) for the decomposition reaction



where  $P$  = pressure,  $x$  = extent of decomposition.

Which one of the following statement is true ?

A.  $K_p$  remains constant with change in  $P$

B.  $K_p$  increases with decrease of  $x$

C.  $K_p$  increases with increase of  $x$

D.  $K_p$  increases with increase of  $P$

**Answer: A**



**Watch Video Solution**

42. A heating coil is immersed in a 100 g sample of  $H_2O$  (l) at a 1 atm and  $100^\circ C$  in a closed vessel. In this heating process, 60% of the liquid is converted to the gaseous form at constant pressure of 1 atm. The densities of liquid and gas under these conditions are  $1000 \text{ kg/m}^3$  and  $0.60 \text{ kg/m}^3$  respectively. Magnitude of the work done for the process is :

(Take : 1L-atm= 100J)

A. 4997 J

B. 4970 J

C. 9994 J

D. 1060 J

**Answer: C**



**Watch Video Solution**

**43.** Isoomerisms exhibited by

$[Cr(NH_3)_2(H_2O)_2Cl_2]^+$  are

A. Isonisation, optical

B. Hydrate , optical

C. Geometrical , optical

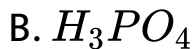
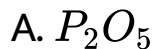
D. Coordinate , geometrical

Answer: C



Watch Video Solution

44. The conjugate base of  $H_2PO_4^-$  is :



Answer: C



Watch Video Solution

45. Chain isomers of  $C_7H_{16}$  is :

A. 3

B. 4

C. 9

D. 8

**Answer: B**



**Watch Video Solution**