

## CHEMISTRY

### BOOKS - NTA MOCK TESTS

#### NTA NEET SET 69

#### Chemistry

1. 4.88 g of  $KClO_3$  when heated produced 1.92 g of  $O_2$  and 2.96 g of KCl. Which of the following statements regarding the experiment is correct?

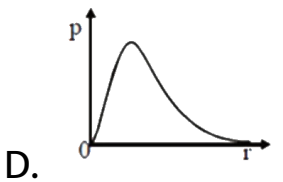
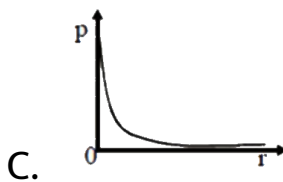
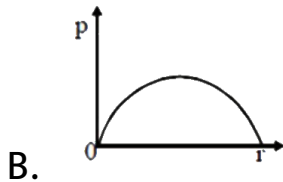
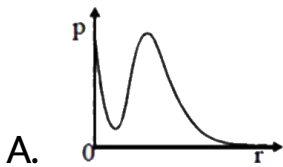
- A. The result illustrates the law of conservation of mass
- B. The result illustrates the law of multiple properties
- C. The result illustrates the law of constant proportion.
- D. None of the above laws is followed

**Answer: A**



**Watch Video Solution**

2.  $P$  is the probability of finding the electron of hydrogen atom in a spherical shell of infinitesimal thickness,  $dr$ , at a distance  $r$  from the nucleus. The volume of this shell is  $4\pi r^2 dr$ . The qualitative sketch of the dependence of  $P$  on  $r$  is



**Answer: D**



**Watch Video Solution**

3. The first ionisation potential of  $Na$  is  $5.1eV$ . The value of electrons gain enthalpy of  $Na^+$  will be

A.  $-5.1eV$

B.  $-10.2eV$

C.  $+2.55eV$

D.  $-2.55eV$

**Answer: A**



**Watch Video Solution**

4. Among  $LiCl$ ,  $RbCl$ ,  $BeCl_2$  and  $MgCl_2$  the compound with the greatest and least ionic character respectively are

A.  $LiCl$ ,  $RbCl$

B.  $RbCl$ ,  $BeCl_2$

C.  $RbCl$ ,  $MgCl_2$

D.  $MgCl_2$ ,  $BeCl_2$

**Answer: B**



5.  $M(OH)_x$  has a  $K_{sp}$  of  $4 \times 10^{-9}$  and its solubility is  $10^{-3}$  M. The value of x is

A. 4

B. 1

C. 3

D. 2

**Answer: D**



**Watch Video Solution**

6. Two gases A and B having the same temperature 'T', Same pressure 'P' and same volume 'V' are mixed. If the temperature of mixture is unchanged and the volume occupied by it is ' $V/2$ ', then the pressure of the mixture will be

A.  $P/2$

B. P

C.  $2P$

D.  $4P$

**Answer: D**



**Watch Video Solution**

7. Which of the following is not true about polymers ?

A. Polymers are high molecular mass

macromolecules

B. Polymers may be of natural or synthetic origin

C. Generally condensation polymers are made up

of one type of monomers only

D. They have high viscosity and do not carry any

charge

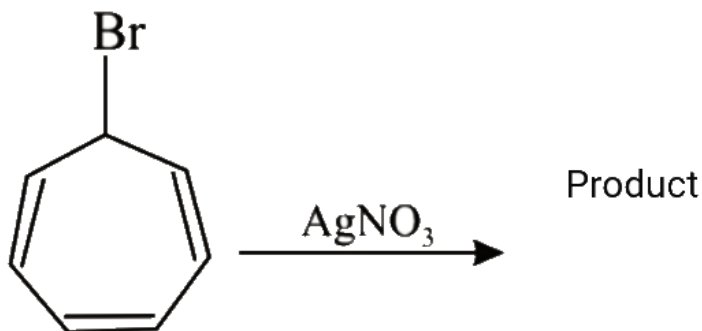
**Answer: C**



**Watch Video Solution**



8. Which is the incorrect statement about the product ?

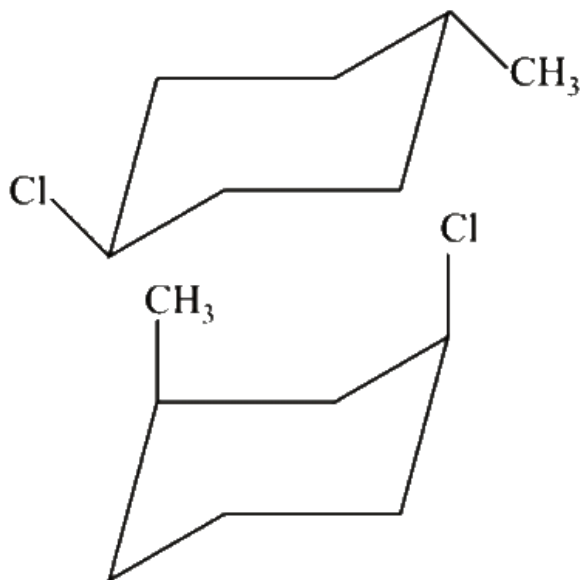


- A. Product is aromatic
- B. Product has high dipole moment
- C. Product has less resonance energy
- D. Product is soluble in water

Answer: C

 Watch Video Solution

9. What is the relationship between the two structures shown ?



A. constitutional isomers

B. stereoisomers

C. different way of representation of a same conformation of the same compound

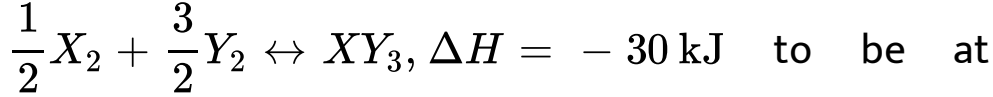
D. different conformation of the same compound

**Answer: A**



**Watch Video Solution**

10. Standard entropies of  $X_2$ ,  $Y_2$  and  $XY_3$  are 60, 40 and  $50 \text{ JK}^{-1} \text{ mol}^{-1}$  respectively. For the reaction



equilibrium, the temperature should be

A. 750 K

B. 1000 K

C. 1250 K

D. 500 K

**Answer: A**



**Watch Video Solution**

11. The oxidation state of platinum in



A. +2

B. +4

C. +6

D. 0

**Answer: A**



**Watch Video Solution**

12.  $pK_a$  of a weak acid is 5.76 and  $pK_b$  of a weak base 5.25 . What will be the pH of the salt formed by the two ?

A. -7.255

B. 7.005

C. 10.25

D. 4.25

**Answer: A**



**Watch Video Solution**

**13.** Hybridisation of 'P' in  $PO_4^{3-}$  is same as that of : -

A. I in  $Icl_4^-$

B. S in  $SO_3$

C. N in  $NO_3^-$

D. S in  $SO_4^{2-}$

**Answer: D**



**Watch Video Solution**

**14.** The  $E_a$  of reaction in the presence of catalyst is  $4.15 \text{ KJ/mol}$  and in absence of catalyst is  $8.3 \text{ KJmol}^{-1}$ . What is the slope of the plot of  $\ln k$  vs  $\frac{1}{T}$  in the absence of catalyst.

A. +1

B. -1

C. +1000

D. – 1000

**Answer: D**



**Watch Video Solution**

**15.** Lead is not affected by dil . HCl in cold , because

A. Pb is less electronegative than H

B. PbO film is formed which resists chemical attack  
by acid.

C. A protective coating of  $PbCl_2$  is formed on Pb  
surface

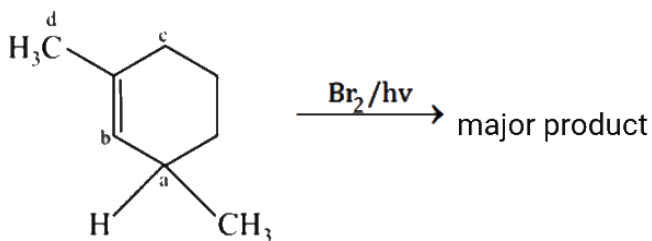


D.  $PbO_2$  of film is always present on Pb surface ,  
which resists chemical attack

Answer: C

 Watch Video Solution

16. Bromination takes place majority at



major

product

A. a

B. b

C. c

D. d

**Answer: A**



**Watch Video Solution**

**17.** Which of the following solution will have the highest boiling point ?

A. 1% solution of glucose in water

B. 1% solution of sucrose in water

C. 1% solution of sodium chloride in water

D. 1% solution of calcium chloride in water

**Answer: C**

 [Watch Video Solution](#)

18. The compound  $K_2[PtCl_4]$  would have a molar conductivity in aqueous solution most closely approaching that of

A.  $KNO_3$

B.  $CCl_4$

C.  $MgSO_4$

D.  $Na_2SO_4$

**Answer: D**



**Watch Video Solution**

**19.** The open glucose and fructose have \_\_\_\_ and \_\_\_\_  
chiral centre

A. 4,4

B. 4,3

C. 3,3

D. 3,4

**Answer: B**



**Watch Video Solution**

**20.** Which of the following ideal gases has higher value of average kinetic energy per mole at the same temperature -  $N_2$ ,  $CO_2$ ,  $O_2$  ?

A.  $N_2$

B.  $CO_2$

C.  $O_2$

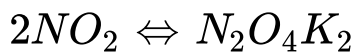
D. All have equal value of KE

**Answer: D**



Watch Video Solution

21. Consider the reactions  $\frac{1}{2}N_2 + O_2 \rightleftharpoons NO_2 K_1$



Using above equations , write down expression for K

of the following reaction  $N_2O_4 \rightleftharpoons N_2 + 2O_2 K$

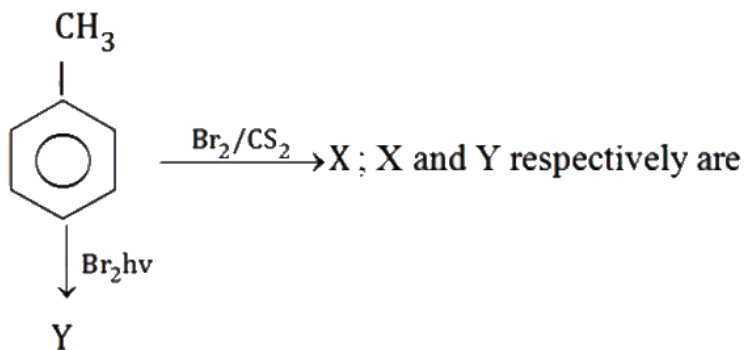
A.  $K_1 K_2$

B.  $\frac{K_2^2}{K_1}$

C.  $\frac{1}{K_1 K_2^2}$

D.  $\frac{1}{K_1^2 K_2}$

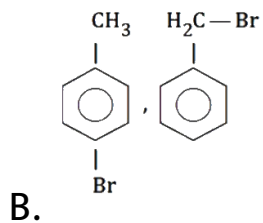
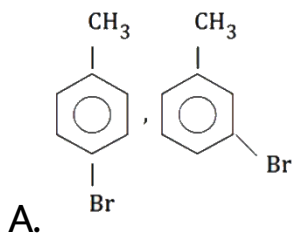
**Answer: D**

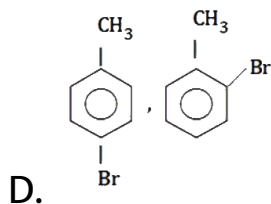
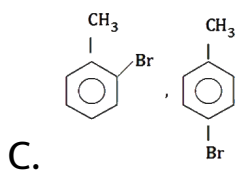


22.

X and

Y respectively are





**Answer: B**

 [Watch Video Solution](#)

**23.** For the equilibrium:



$$K_p = 9 \text{ atm}^2$$

at  $40^\circ C$ . A *5litre* vessel contains 0.1 mole of  $LiCl \cdot NH_3$ . How many mole of  $NH_3$  should be added



to the flask at this temperature to derive the backward reaction for completion?

A. 0.49

B. 0.59

C. 0.69

D. 0.79

**Answer: D**



**Watch Video Solution**

**24.** The tranquilizer obtained from the plant Rauwolfia Serpentine is

A. reserpine

B. iproniazid

C. chlorodiazepoxide

D. meprobamate

**Answer: A**



**Watch Video Solution**

**25.** Which of the following practices involve green chemistry ?

(i) Substitute CFCs by environmental friendly HFCs and other compounds

(ii) Replace halogenated solvent by liquid  $CO_2$  for drycleaning ,

(iii) Use of  $H_2O_2$  for bleaching instead of  $Cl_2$

(iv) Use of tamarind seeds to clean municipal and industrial waste water.

A. (i) and (ii)

B. (ii) and (iv)

C. (iii) and (iv)

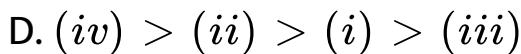
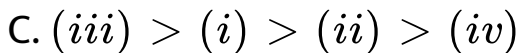
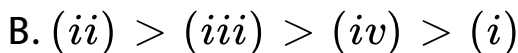
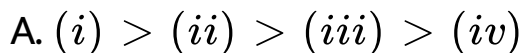
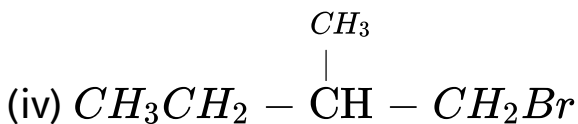
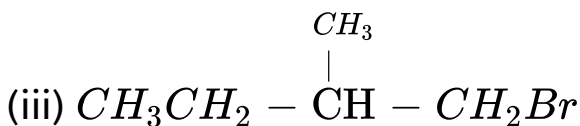
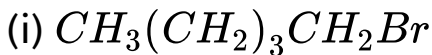
D. (i),(ii) nad (iii)

**Answer: D**



**Watch Video Solution**

26. Arrange the following compounds in order of their reactivity towards  $S_N2$  reaction

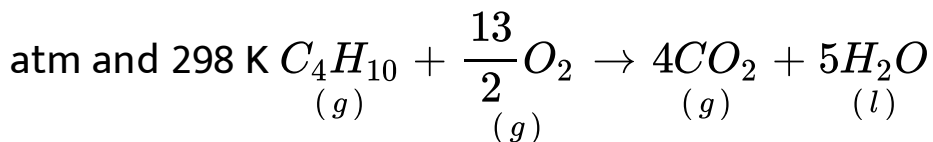


**Answer: A**



Watch Video Solution

27. A fuel cell involves combustion of butane at at 1



$\Delta G^\circ = -2746 \text{ kJ/mol}$  The value of  $E^\circ_{\text{cell}}$  is nearly ?

A. 0.8 V

B. 1 V

C. 1.2 V

D. 1.4 V

**Answer: B**



Watch Video Solution

**28.** Ethylene dichloride and ethylidene chloride are isomeric compounds. The false statement about these isomers is that they

A. are both hydrolysed to the same product

B. contain the same percentage of chlorine

C. are position isomers

D. react with alcoholic potash and give the same product

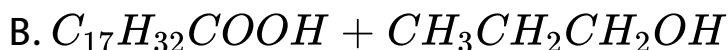
**Answer: A**



**Watch Video Solution**

29. What are the hydrolysis products of glyceryl oleate

$(C_{17}H_{32}COO)_3C_3H_5$  during preparation of soap?



C.



D.

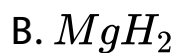


**Answer: D**



**Watch Video Solution**

30. Which of the following is least stable



**Answer: D**



**Watch Video Solution**



**31.** Pick out the incorrect statement for transition metals

A. They have low melting and boiling points (or low enthalpies of atomization)

B. 5d - elements have higher ionization energies than 3d or 4d elements

C. Zr and Hf have almost identical atomic and ionic radii

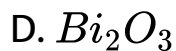
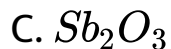
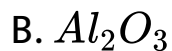
D. They form interstitial compounds

**Answer: A**



**Watch Video Solution**

32. Which of the following is the most basic oxide?

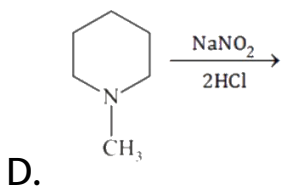
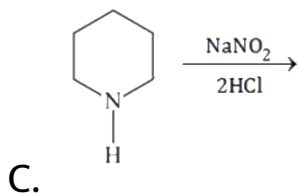
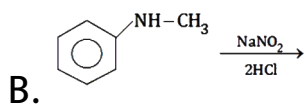
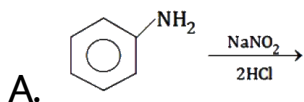


**Answer: D**



**Watch Video Solution**

33. In which of the reaction formation of Diazonium salt takes place ?



Answer: A



Watch Video Solution

**34.** The condition for methamoglobinemia by drinking water is

A. > 50 PPm lead

B. > 50 PPm chloride

C. > 50 PPm nitrate

D. > 100 PPm sulphate

**Answer: C**



**Watch Video Solution**

**35.** The arrangement of sulphur in zinc blende and wurtzite structures , respectively are

- A. hexagonal close packing and cubic close packing
- B. cubic close packing and hexagonal close packing
- C. simple cubic packing in both the structures
- D. hexagonal close packing in both the structures

**Answer: B**



**Watch Video Solution**

36. Hydrogen peroxide in its reaction with  $KIO_4$  and  $NH_2OH$  respectively, is acting as a

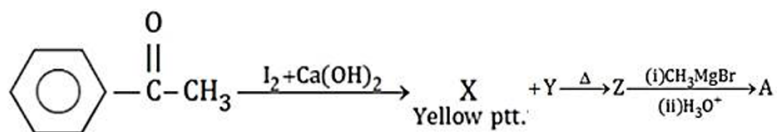
- A. reducing agent, oxidising agent
- B. reducing agent , reducing agent
- C. oxidising agent , oxidising agent
- D. oxidising agent , reducing agent

**Answer: D**

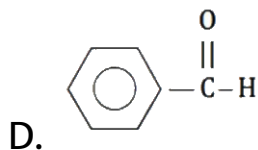
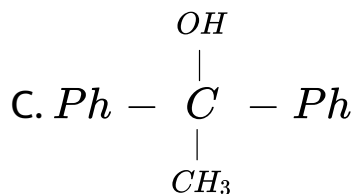
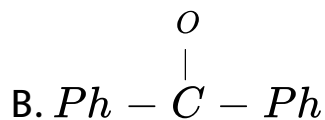


**Watch Video Solution**

### 37. Identify final product's



A.  $\text{CHI}_3$



Answer: C



Watch Video Solution

38. The oxidation state of nitrogen is correctly given for

- A. 

Compound	Oxidation
$NH_3$	+3
- B. 

Compound	Oxidation
$[Co(NH_3)_5Cl]$	+1
- C. 

Compound	Oxidation
$Mg_3N_2$	-3
- D. 

Compound	Oxidation
$NH_2OH$	+1

Answer: C

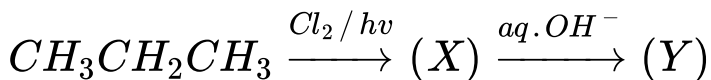


Watch Video Solution



39. Consider the following sequence of reaction.

Identify the final product (Y)



A. propan -1 -ol

B. propan -2- ol

C. mixture of both propan -1-ol and propan - 2 - ol

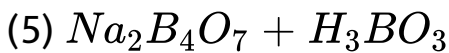
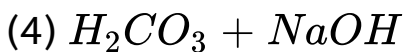
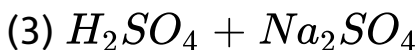
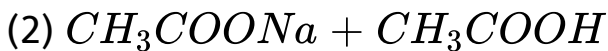
D. ethanol

**Answer: B**



**Watch Video Solution**

40. How many of the following combination act as buffer



A. 3

B. 4

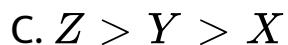
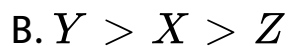
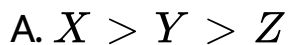
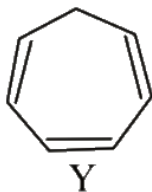
C. 2

D. 6

Answer: B

 Watch Video Solution

41. Decreasing order of acidic strength of following compound is



$$D. Z > X > Y$$

**Answer: D**



**Watch Video Solution**

**42.** Formic acid acetic acid can be distinguished with

A. sodium

B.  $HgCl_2$

C. 2, 4 - dinitrophenyl hydrazine

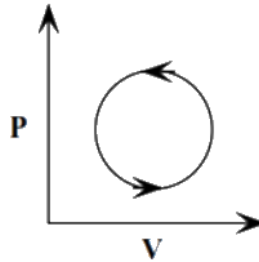
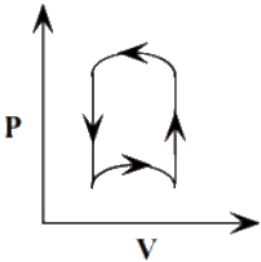
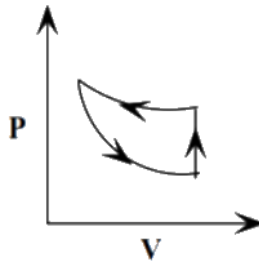
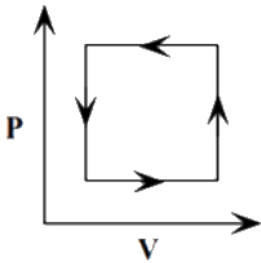
D.  $CH_3CH_2\overset{-}{O}\overset{+}{Na}$

**Answer: B**



Watch Video Solution

43. What will be nature of change in internal energy in case of processes shown below ?



A.  $+ve$  in all cases

B.  $-ve$  in all cases

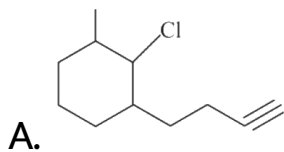
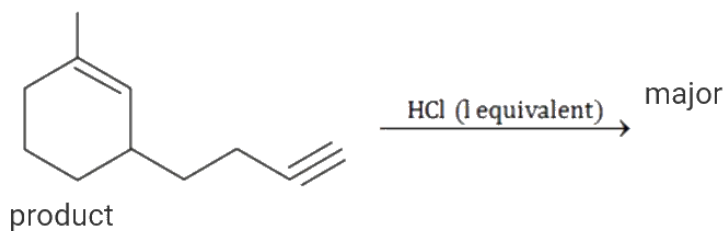
C. cannot say

D. zero in all cases

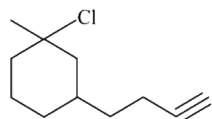
**Answer: D**

 **Watch Video Solution**

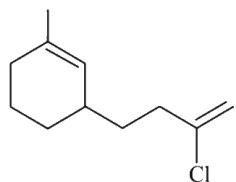
**44.** Predict the major product / s of the given reaction



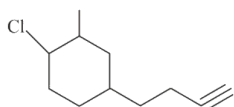
B.



C.



D.



**Answer: B**



**Watch Video Solution**

**45.** The ratio of areas within the electron orbits for the first excited state to the ground state for hydrogen atom is

A. 16:1

B. 4:1

C. 8:1

D. 1:8

**Answer: A**



**Watch Video Solution**