

# CHEMISTRY

## BOOKS - NTA MOCK TESTS

### NTA NEET SET 75

#### Chemistry

1. Slope of the straight line obtained by plotting  $\log_{10} k$  against  $1/T$  represents what term ?

A.  $-E_a$

B.  $-2.303E_a / R$

C.  $-E_a / (2.303R)$

D.  $-E_a / R$

**Answer: C**



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2. Pick out the incorrect statement about glycolysis

A. It is anaerobic respiration

- B. During glycolysis glucose is converted into pyruvate or lactate with generation of 38 molecules of ATP per molecule of glucose
- C. Glycolysis provides energy to those cells which live without oxygen
- D. It occurs in the cytoplasm of the cell

**Answer: B**



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3. For which of the following process energy is absorbed :

A. Separating an electron from an electron

B. Separating a proton from a proton

C. Separating a neutron from a neutron

D. Separating an electron from a neutral  
atom

**Answer: D**



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4. What type of intermolecular forces exist between  $NH_3$  and  $C_6H_6$  ?

A. Dispersion forces

B. Dipole - dipole forces

C. Dipole - induced dipole forces and dispersion forces

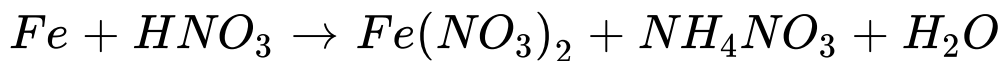
D. Dispersion and dipole - dipole forces

**Answer: C**



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5. The ratio of coefficient of  $HNO_3$ ,  $Fe(NO_3)_2$  and  $NH_4NO_3$  in the following redox reaction



are respectively

A. 10:1:4

B. 10:4:1

C. 4:10:1

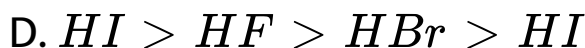
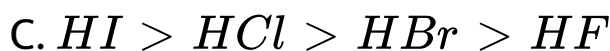
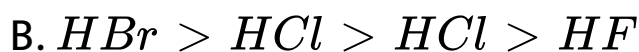
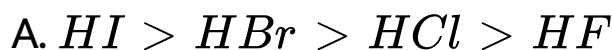
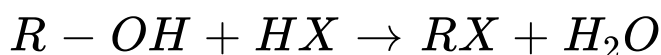
D. 4:1:10

**Answer: B**



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6. List the hydrogen halide acids in decreasing order of reactivity in the following reaction

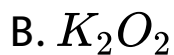


**Answer: A**



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7. Which of the following oxides is formed when potassium metal is burnt in excess air ?



**Answer: C**



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8. A compound has the formula  $C_2HCl_2Br$ . The number of non - identical structures that are possible is

A. one

B. two

C. three

D. four

**Answer: C**



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9. The molecule of which gas have highest speed ?

A.  $H_2$  at  $-73^\circ C$

B.  $CH_4$  at  $300K$

C.  $N_2$  at  $1027^\circ C$

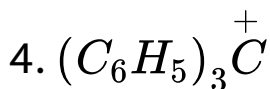
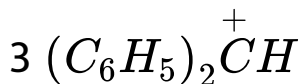
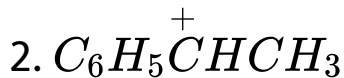
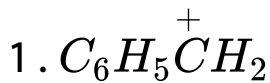
D.  $O_2$  at  $0^\circ C$

**Answer: A**



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10. Consider the following carbocations



The correct sequence of increasing order of their stabilities is

A.  $1 < 2 < 4 < 3$

B.  $4 < 2 < 3 < 1$

C.  $1 < 2 < 3 < 4$

D.  $1 > 2 > 4 > 3$

**Answer: C**



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**11. Hydrolysis of benzonitrile gives**

A. benzlamine

B. aniline

C. benzoic acid

D. phenol

**Answer: C**





12. Pick out the incorrect statement

A. In ferromagnetic material , all the magnetic moments are aligned in the same direction

B. In anti - ferromagnetic material , magnetic moments are aligned in parallel and anti - parallel directions in equal numbers

- C. In ferrimagnetism, magnetic moments are aligned in parallel and anti-parallel direction in unequal number
- D. Paramagnetism of a substance increases at elevated temperature

**Answer: D**



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**13. Pick out the incorrect statements for HI.**

A. It reduces  $H_2SO_4$  to  $SO_2$

B. It reduces iodic acid to  $I_2$

C. It does not decolourise acidified  $KMnO_4$

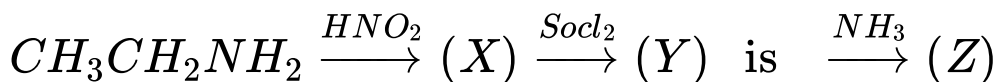
D. It liberates  $I_2$  with  $CuSO_4$  solution

**Answer: C**



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14. The final product (Z) is the following sequence of reaction



A. methanamine

B. ethanamide

C. ethanamine

D. propan-1- amine

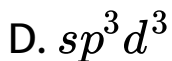
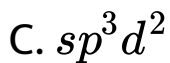
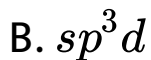
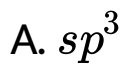
**Answer: C**



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**15.** Which type of hybridization of Xe is involved in  $XeOF_4$  molecule ?





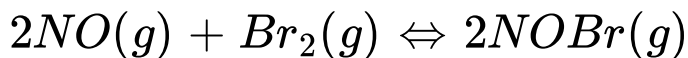
**Answer: C**



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**16.** The partial pressures of  $NO$ ,  $Br_2$ , and  $NOBr$  in a flask at  $25^\circ C$  are 0.01, 0.1, and 0.04 atm, respectively. If the equilibrium constant at  $25^\circ C$

for the reaction



is equal to  $160\text{atm}^{-1}$ , then we can say that

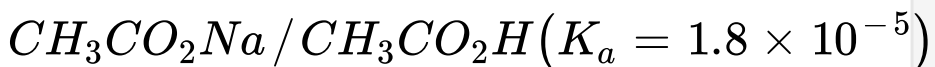
- A. there is equilibrium in the flask
- B. there reaction will proceed in the forward
- C. the reaction will proceed in the backward  
direction
- D. the partial pressure of NOBr finally will be  
0.05 atm

**Answer: A**

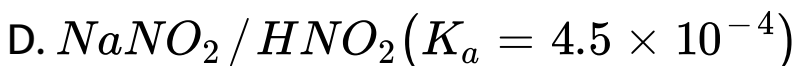
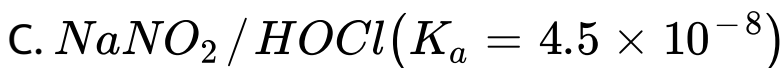


17. Which one of the following mixtures is suitable for making a buffer solution with an optimum pH of 9.2 - 9.3 ?

A.



B.



Answer: B



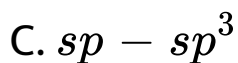
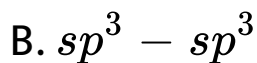
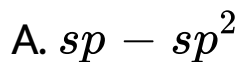
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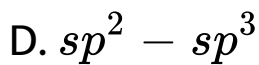
18. In the compound ,



, the C2 -

C3 bond is of the type :





**Answer: D**



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**19.** The type of isomerism present in pentaammine-chromium(*III*)chloride is:

A. Polymerization

B. Geometrical

C. Optical

D. Linkage

**Answer: D**



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**20.** Alkane can be prepared by

A. at action of Grignard's reagent with water

B. the reduction of alkyl halide with  $H_2$  in  
presence of nickel

C. the action of ethereal of alkyl halide with sodium metal

D. all the above

**Answer: D**



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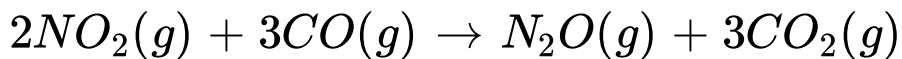
**21.**

$\Delta_f H^\circ$  of  $CO_2(g)$ ,  $CO(g)$ ,  $N_2O(g)$  and  $NO_2(g)$

in KJ/ mol are respectively -393 -110,81 and

34. Calculate the  $\Delta H$  in kj of the following

reaction:



A. 836

B. 1460

C. - 836

D. - 1460

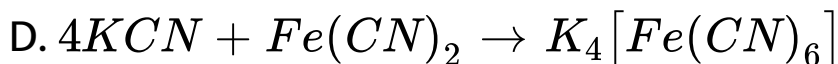
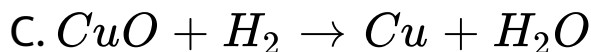
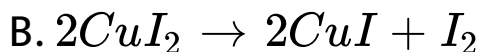
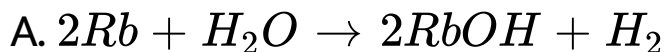
**Answer: C**



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22. Which of the following reaction does not involve oxidation - reduction ?

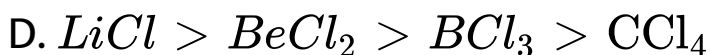
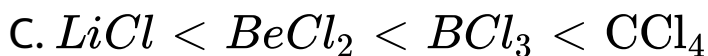
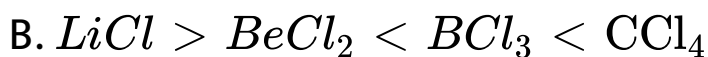
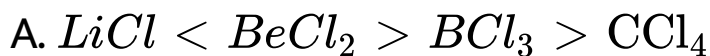


Answer: D



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23. Among  $LiCl$ ,  $BeCl_2$ ,  $BCl_3$  and  $CCl_4$ , the covalent bond character follows the order-



**Answer: C**



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**24.** The maximum number of electrons with  $n = 3$  and  $l = 3$  is

A. 11

B. 6

C. 10

D. 0

**Answer: D**



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25.  $V_2O_5$  is red or orange in colour. It is *a/an* ...oxide

A. acidic

B. basic

C. amphoteric

D. neutral

**Answer: C**



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26. 100 mL of liquid A was mixed with 25 mL of liquid B to give non-ideal solution of A-B. The volume of this mixture will be

A. 75 mL

B. 125 mL

C. close to 125 mL, but not exceeding 125 mL

D. just more than 125 mL

**Answer: C**



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27. One mL of an organic compound was dissolved in ethanol and a very small drop of dilute alkali was added to it and then a drop of phenolphthalein was added. The red colour of the indicator was seen. The mixture was then heated. The colour disappeared in a few minutes. The organic compound is most likely to be

A. an aldehyde

B. a ketone

C. a carboxylic acid

D. an ester

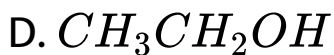
**Answer: D**



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**28.** Which the following does not respond to iodoform reaction ?





Answer: C



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29. A mixture of 2 mol of carbon monoxide and 1 mol of oxygen in a closed vessel is ignited to get carbon dioxide, then

A.  $\Delta H > \Delta E$

B.  $\Delta H < \Delta E$

C.  $\Delta H = \Delta E$



D. not definite

Answer: B

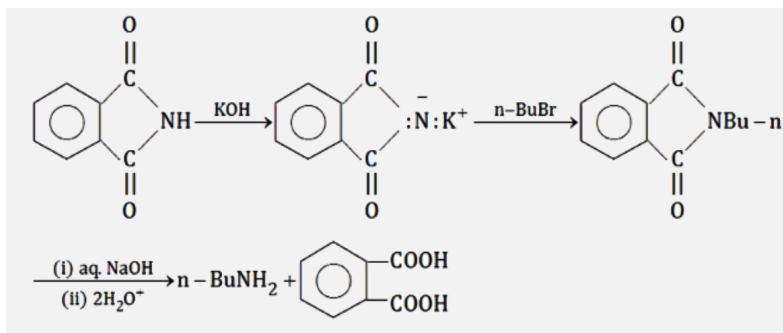


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30.

The

reaction



is called

A. Carbylamine reaction

B. Hofmann reaction

C. Gabriel phthalimide synthesis

D. Cope reaction

**Answer: C**



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**31.** Which statement is true in regard to a spontaneous redox reaction ?

A.  $E_{red}$  is always negative

B.  $E_{Cell}$  is always positive

C.  $E_{\text{ox}}$  is always positive

D.  $E_{\text{red}}$  is always positive

**Answer: B**



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**32.** Which of the following aqueous solution will have a  $pH$  less than 7.0 ?

A.  $KNO_3$

B.  $NaOH$

C.  $FeCl_3$

D.  $NaCH$

**Answer: C**



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**33.** When a sulphur sol is evaporated, solid sulphur is left. On mixing with water no colloidal sol is formed. The sulphur sol is :

A. Lyophilic

B. Reversible

C. Hydrophobic

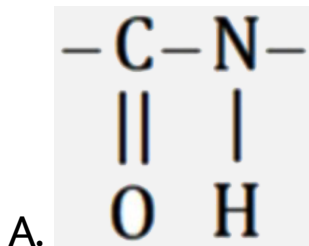
D. Hydrophilic

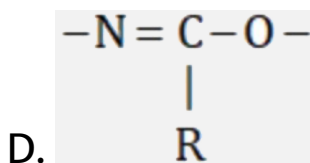
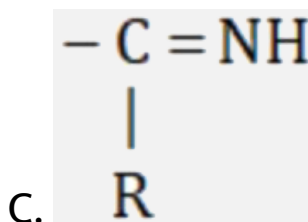
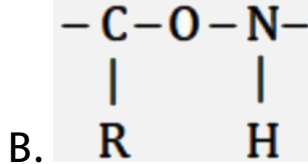
**Answer: C**



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**34.** Which among the following is a peptide linkage ?





**Answer: A**



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**35.** The colloidal solutions of gold prepared by different methods have different colors due to :

- A. variable valency of gold
- B. different concentration of gold particles
- C. different type of impurities
- D. different diameters of colloidal particles

**Answer: D**



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**36.** If initial concentration is doubled, the time for half-reaction is also doubled, the order of reaction is

A. zero

B. third

C. second

D. first

**Answer: A**



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**37.** Which of the following gives  $PH_3$  on treatment with water ?



A.  $Ca_3P_2$

B.  $Na_3P$

C. AlP

D. All of the above

**Answer: D**



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**38.** Compare the boiling points of

1. n - butylamine

2. n - butyl alcohol

3. pentane

A.  $2 > 3 > 1$

B.  $2 > 1 > 3$

C.  $1 > 3 > 2$

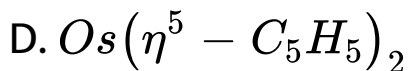
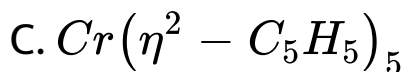
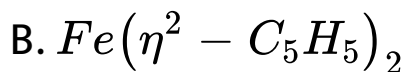
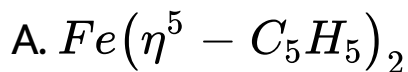
D.  $3 > 2 > 1$

**Answer: B**



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**39. Ferrocene is**



**Answer: A**



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**40.** The reaction of  $CO + HCl$  in the presence of  $AlCl_3$  with benzene to form benzaldehyde is called

A. Meerwein - Ponndorf - Verley reaction

B. Cannizzaro reaction

C. Gatterman - Koch reaction

D. Bayer - Villegier reaction

**Answer: C**



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**41.** The electronic configuration of an element  $X$  is  $1s^2, 2s^2, 2p^6, 3s^2, 3p^3$ . What is the atomic

number of the element which is just below the element  $X$  in the periodic table?

A. 33

B. 34

C. 31

D. 49

**Answer: A**



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42. The radius of an atom is 100 pm. If this element crystallizes in FCC lattice, the edge length of unit cell is

A. 280 pm

B. 150 pm

C. 141.4 pm

D. none of the above

**Answer: A**



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43. Maximum number of active hydrogen are present in

A. ethanoic acid

B. ethyne

C. methanol

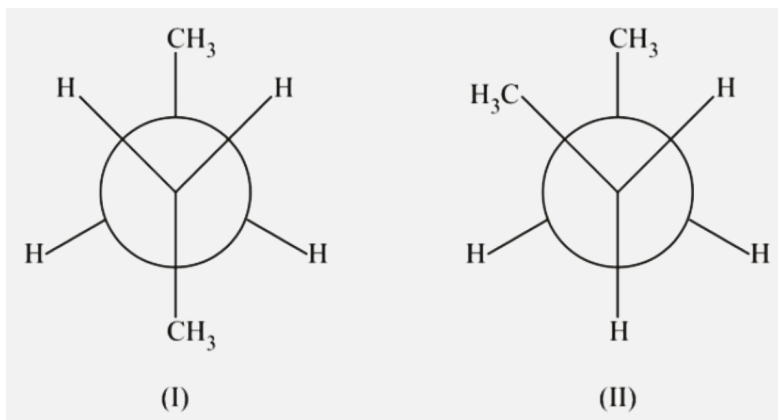
D. glycerol

**Answer: D**



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44. The pair of structure given below



represents

- A. conformational enantiomers
- B. conformational diastereomers
- C. structural isomers
- D. none of the above



**Answer: B**



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**45.** Which series of elements have nearly the same atomic radii ?

A. Fe , Co , Ni

B. Na , K , Rb

C. Li, Be, Mg

D. F, Cl , Br

**Answer: A**



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