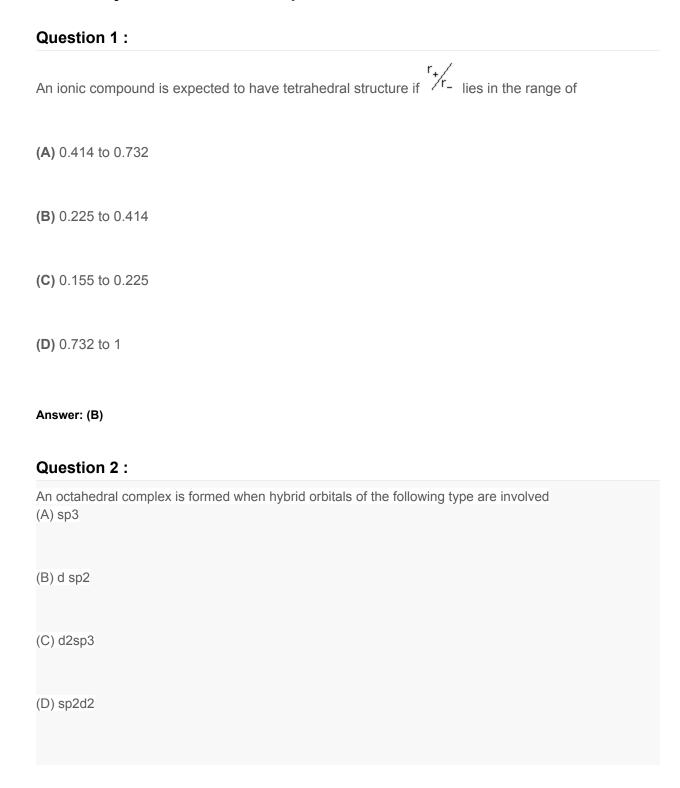
# **Chemistry Model Question Paper - 5**

Answer: (C)



## Question 3:

An organic compound on heating with CuO produces CO<sub>2</sub> but no water. The organic compound may be

- (A) Methane
- (B) Ethyl iodide
- (C) Carbon tetrachloride
- (D) Chloroform

#### Answer: (C)

## Question 4:

An organic compound X is oxidised by using acidified K2Cr2O7. The product obtained reacts with Phenylhydrazine but does not answer the silver mirror test. The possible structure of X is **(A)** (CH3)2CHOH

- **(B)** CH3CHO
- (C) CH3CH2OH

Answer: (A)
Question 5:
An oxygen containing organic compound upon oxidation forms a carboxylic acid as the only organic
product with its molecular mass higher by 14 units. The organic compound is
(A) a primary alcohol
(B) an aldehyde
(C) a ketone
(D) a secondary alcohol
Answer: (A)
Question 6: Anisole can be prepared by the action of methyl iodide on sodium phenate. The reaction is called (A) Wurtz's reaction
(B) Williamson's reaction
(C) Fittig's reaction
(D) Etard's reaction
Answer: (B)
Question 7: Argon is used (A) in high temperature welding
(B) in radiotherapy for treatment of cancer

(C) in filling airships

(D) to obtain low temperature

Answer: (A)

**Question 8:** Arrange the following in the increasing order of their basic strengths: CH3NH2, (CH3)2NH, (CH3)3N, NH3

- (A) (CH3)3N < NH3 < CH3NH2 < (CH3)2 NH
- (B) CH3NH2 < (CH3)2NH < (CH3)3N < NH3
- (C) NH3 < (CH3)3N < (CH3)2NH < CH3NH2
- (D) NH3 < (CH3)3N < CH3NH2 < (CH3)2NH

Answer: (D)

**Question 9:** Arrange the following in the increasing order of their bond order:

O2, 
$$O^{\frac{1}{2}}$$
,  $O^{\frac{1}{2}}$  and O

(A) 
$$O^{\frac{1}{2}}$$
,  $O2$ ,  $O^{\frac{1}{2}}$ ,  $O^{\frac{1}{2}}$ 

$$(C) O^{\frac{1}{2}}, O^{\frac{1}{2}}, O^{\frac{1}{2}}$$

(D) 
$$O^{\frac{-}{2}}$$
,  $O^{\frac{-}{2}}$ ,  $O^{\frac{+}{2}}$ , O2

Answer: (C)

Question 10: Based on the first law of thermodynamics, which one of the following is correct?

- (A) For an adiabatic process:  $\Delta U = -w$
- **(B)** For an isochoric process:  $\Delta U = -q$
- (C) For a cyclic process: q = -w
- **(D)** For an isothermal process: q = +w

Answer: (C)

Question 11: The yellow precipitate formed during the chromyl chloride test is chemically  (A) lead chromate  (B) chromic acid  (C) sodium chromate  (D) lead acetate
Answer: (A)
Question 12: The typical range of molar enthalpies for the strongest intermolecular (Hydrogen) bonds is  (A) 200 – 300 kJ  (B) 300 – 500 kJ  (C) 4 – 25 kJ  (D) 4 – 25 J
Answer: (C)
Question 13:  The time required for 100% completion of a zero order reaction is
The time required for 100 % completion of a zero order reaction is
(A) a/2k
<b>(B)</b> ak
(C) 2k/a
<b>(D)</b> a/k
Answer: (D)

# Question 14:

The standard emf of a galvanic cell involving 2 moles of electrons in its rodox reaction is 0.59 V.
The equilibrium constant for the redox reaction of the cell is
(A) 105
(B) 1020
(C) 10 <sub>10</sub>
(D) 10
Answer: (B)
Question 15 :
The spin only magnetic moment of Fe2+ ion (in BM) is approximately
(A) 7
(B) 4
(C) 6
<b>(D)</b> 5
Answer: (D)