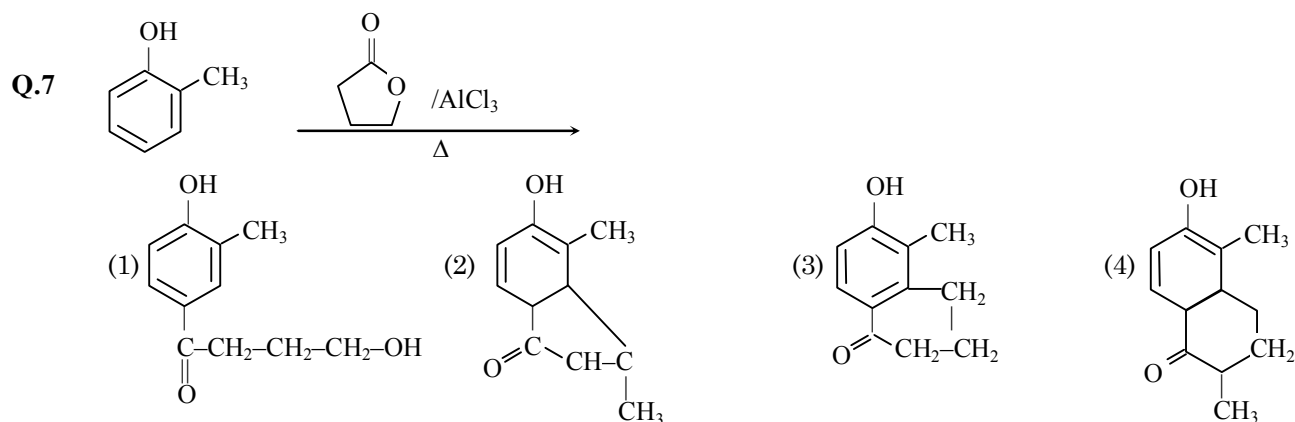




Q.6 What is pH of Rain water -

- (1) 5.6 (2) 7.6 (3) 7 (4) 10

Ans. [1]

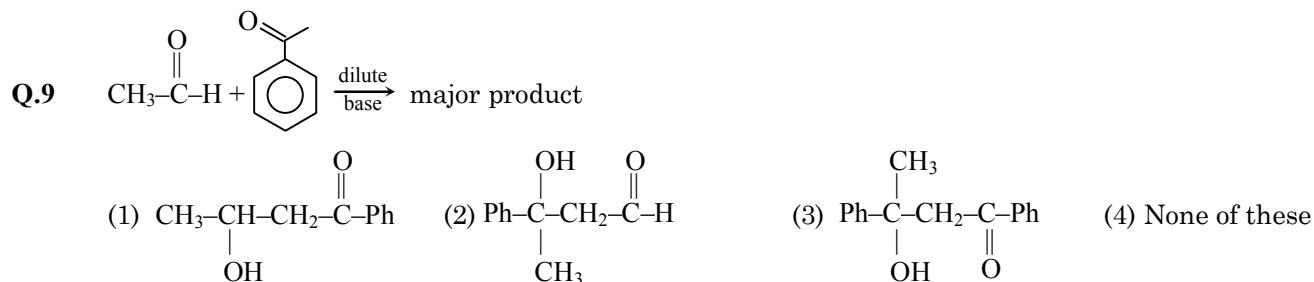


Ans. [3]

Q.8 Which process observe increase in bond order and change from paramagnetic to diamagnetic -

- (1)  $O_2 \longrightarrow O_2^{\oplus}$  (2)  $NO \longrightarrow NO^{\oplus}$  (3)  $O_2 \longrightarrow O_2^{\ominus}$  (4)  $N_2 \longrightarrow N_2^{\oplus}$

Ans. [2]



Ans. [1]

Q.10 Reason for temporary hardness -

- (1) NaCl (2) BaCl<sub>2</sub> (3) CaCl<sub>2</sub> (4) Ca(HCO<sub>3</sub>)<sub>2</sub>

Ans. [4]

Q.11 Reducing strength of H<sub>3</sub>PO<sub>2</sub> is due to which of the following -

- (1) 1 P-OH bond (2) 2 P-OH bond (3) 2 P-H bond (4) 1 P-H bond

Ans. [3]

Q.12 Which of the following is not aromatic -



Ans. [1]

**Q.13** Which of the following has maximum tendency to coagulate  $As_2S_3$  -  
 (1)  $AlCl_3$  (2)  $BaCl_2$  (3)  $Na_3PO_4$  (4)  $NaCl$

**Ans.** [1]

**Q.14** Which of the following has highest heat of atomization ?  
 (1) Sc (2) V (3) Fe (4) Zn

**Ans.** [2]

**Q.15**  $2C_{57}H_{110} + 169O_2 \rightarrow 110 H_2O + 114 CO_2$ . If mass of  $C_{57}H_{110}$  is 445 gm then the mass of  $H_2O$  will be -  
 (1) 554.76 gm (2) 230 gm (3) 234.56 gm (4) 460 gm

**Ans.** [1]

**Q.16** If 0.2 M, 10 ml NaOH is dissolved 0.1 M, 20 ml  $CH_3COOH$ , the pH of the resulting solution. If  $pK_a = 4.74$ .  
 (1) 7.89 (2) 8.78 (3) 9.34 (4) 10.23

**Ans.** [2]

**Q.17** Which of the following has highest  $\Delta_0$   
 (1)  $[Co(NH_3)_5H_2O] Cl_3$  (2)  $K_4 [Co(NH_3)_5Cl]$  (3)  $K_3[Co(CN)_6]$  (4)  $[Co(H_2O)_6]Cl_3$

**Ans.** [3]

**Q.18** Which of the following statement is or are correct -

(a) angular momentum is integral multiple of  $\frac{h}{2\pi}$ .

(b) Principal quantum number depends on size.

(c) Azimuthal quantum number depends on size.

(d) magnetic quantum number is related to shape of the orbital.

(1) a, c

(2) a, d

(3) c, d

(4) a, b

**Ans.** [4]

**Q.19** 62 g of ethylene glycol is present in 250 g of water, If water is cooled to  $-10^\circ C$ . Then how much ice is separated -

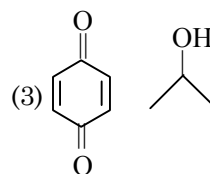
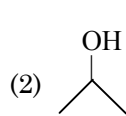
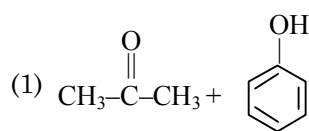
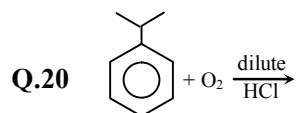
(1) 64

(2) 120

(3) 90

(4) 35

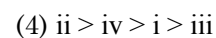
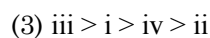
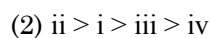
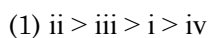
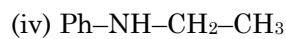
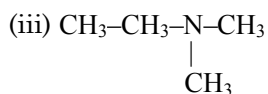
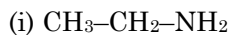
**Ans.** [1]



(4) All of these

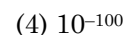
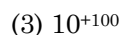
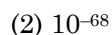
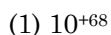
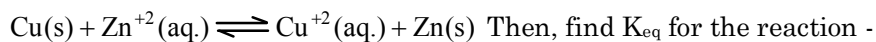
**Ans.** [1]

**Q.21** Arrange in order of basicity ?



**Ans.** [1]

**Q.22** If standard electrode potential at 300 k for the given reaction is 2 volt



**Ans.** [1]

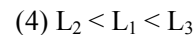
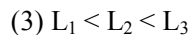
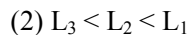
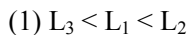
**Q.23** Ligands      Absorbed light

$L_1$             Green

$L_2$             Blue

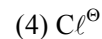
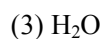
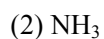
$L_3$             Red

What is correct order of strength of ligand -



**Ans.** [1]

**Q.24** Which of the following is strongest field ligands -



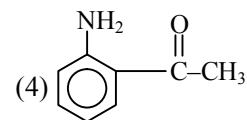
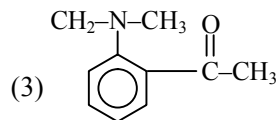
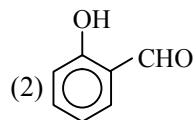
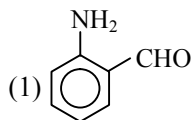
**Ans.** [1]

**Q.25** Which compound will give -

(i) Positive iodoform test

(ii) 2, 4 DNP test

(iii) Diazonium formation



**Ans.** [4]