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# Questions & Answer

## for

### NEET 2022\_(Re-Exam)

#### Chemistry

51. Match List - I with List - II :

List - I (quantum number)	List- II (orbital)
(a) $n = 2, \ell = 1$	(i) 2 s
(b) $n = 3, \ell = 2$	(ii) 3 s
(c) $n = 3, \ell = 0$	(iii) 2 p
(d) $n = 2, \ell = 0$	(iv) 3 d

Choose the **correct answer** from the options given below :

- (1) (a) - (iii), (b) - (iv), (c) - (ii), (d) - (i)  
 (2) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)  
 (3) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)  
 (4) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

Answer (1)

52. The density of the solution is  $2.15 \text{ g mL}^{-1}$ , then mass of 2.5 mL solution in correct significant figures is :

- (1) 53.75 g  
 (2)  $5375 \times 10^{-3} \text{ g}$   
 (3) 5.4 g  
 (4) 5.38 g

Answer (3)

53. Given below are two statements : one is labelled as Assertion (A) and the other is labelled as Reason (R).

**Assertion (A) :**

Chlorine is an electron withdrawing group but it is ortho, para directing in electrophilic aromatic substitution.

**Reason (R) :**

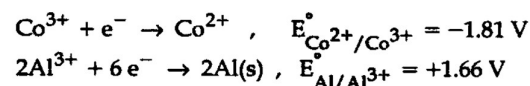
Inductive effect of chlorine destabilises the intermediate carbocation formed during the electrophilic substitution, however due to the more pronounced resonance effect, the halogen stabilises the carbocation at ortho and para positions.

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) (A) is not correct but (R) is correct.  
 (2) Both (A) and (R) are correct and (R) is the correct explanation of (A).  
 (3) Both (A) and (R) are correct but (R) is not the correct explanation of (A).  
 (4) (A) is correct but (R) is not correct.

Answer (4)

54. Two half cell reactions are given below.



The standard EMF of a cell with feasible redox reaction will be :

- (1) - 3.47 V                      (2) + 7.09 V  
 (3) + 0.15 V                    (4) + 3.47 V

Answer (4)

55. Match List - I with List - II :

List - I (Compounds)	List - II (Molecular formula)
(a) Borax	(i) $\text{NaBO}_2$
(b) Kernite	(ii) $\text{Na}_2\text{B}_4\text{O}_7 \cdot 4 \text{H}_2\text{O}$
(c) Orthoboric acid	(iii) $\text{H}_3\text{BO}_3$
(d) Borax bead	(iv) $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10 \text{H}_2\text{O}$

Choose the **correct answer** from the options given below :

- (1) (a) - (i), (b) - (iii), (c) - (iv), (d) - (ii)  
 (2) (a) - (iv), (b) - (ii), (c) - (iii), (d) - (i)  
 (3) (a) - (ii), (b) - (iv), (c) - (iii), (d) - (i)  
 (4) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)

Answer (2)

56. The correct order of first ionization enthalpy for the given four elements is :

- (1)  $C < F < N < O$       (2)  $C < N < F < O$   
 (3)  $C < N < O < F$       (4)  $C < O < N < F$

Answer (4)

57. Match List - I with List - II :

List - I (Defects)	List - II (shown by)
(a) Frenkel defect	(i) non-ionic solids and density of the solid decreases
(b) Schottky defect	(ii) non-ionic solids and density of the solid increases
(c) Vacancy defect	(iii) ionic solids and density of the solid decreases
(d) Interstitial defect	(iv) ionic solids and density of the solid remains constant

Choose the **correct answer** from the options given below :

- (1) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)  
 (2) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)  
 (3) (a) - (i), (b) - (iii), (c) - (ii), (d) - (iv)  
 (4) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

Answer (1)

58. Predict the order of reactivity of the following four isomers towards  $S_N2$  reaction.

- (I)  $CH_3CH_2CH_2CH_2Cl$   
 (II)  $CH_3CH_2CH(Cl)CH_3$   
 (III)  $(CH_3)_2CHCH_2Cl$   
 (IV)  $(CH_3)_3CCl$

- (1) (IV) > (II) > (III) > (I)  
 (2) (IV) > (III) > (II) > (I)  
 (3) (I) > (II) > (III) > (IV)  
 (4) (I) > (III) > (II) > (IV)

Answer (4)

59. Match List - I with List - II :

List - I (molecules)	List - II (shape)
(a) $NH_3$	(i) square pyramidal
(b) $ClF_3$	(ii) trigonal bipyramidal
(c) $PCl_5$	(iii) trigonal pyramidal
(d) $BrF_5$	(iv) T-shape

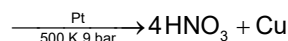
Choose the **correct answer** from the options given below :

- (1) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)  
 (2) (a) - (ii), (b) - (iii), (c) - (iv), (d) - (i)  
 (3) (a) - (iii), (b) - (iv), (c) - (ii), (d) - (i)  
 (4) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)

Answer (3)

60. Which of the following reactions is a part of the large scale industrial preparation of nitric acid

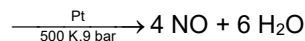
- (1)  $Cu(NO_3)_2 + 2 NO_2 + 2 H_2O$



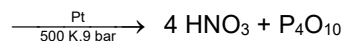
- (2)  $NaNO_3 + H_2SO_4$



- (3)  $4 NH_3 + 5 O_2$  (from air)



- (4)  $4 HPO_3 + 2 N_2O_5$



Answer (3)

61. Match List - I with List - II :

List - I	List - II
(a) Sodium laurylsulphate	(i) Toilet soap
(b) Cetyltrimethyl ammonium chloride	(ii) Non-ionic detergent

- (c) Sodium stearate (iii) Anionic detergent  
(d) Polyethyleneglycol (iv) Cationic stearate detergent

Choose the **correct answer** from the options give below :

- (1) (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)  
(2) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)  
(3) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii)  
(4) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)

Answer (4)

62. Which among the following is a thermoplastic polymer ?

- (1) Melamine polymer  
(2) Bakelite  
(3) Polythene  
(4) Urea-formaldehyde resin

Answer (3)

63.  $\text{Na}_2\text{B}_4\text{O}_7 \xrightarrow{\text{heat}} \text{X} + \text{NaBO}_2$

in the above reaction the product "X" is :

- (1)  $\text{NaB}_3\text{O}_5$  (2)  $\text{H}_3\text{BO}_3$   
(3)  $\text{B}_2\text{O}_3$  (4)  $\text{Na}_2\text{B}_2\text{O}_5$

Answer (3)

64. One mole of an ideal gas at 300 K is expanded isothermally from 1 L to 10 L volume.  $\Delta U$  for this process is :

(Use  $R = 8.314 \text{ J K}^{-1} \text{ mol}^{-1}$ )

- (1) 0 J (2) 1260 J  
(3) 2520 J (4) 5040 J

Answer (1)

65. Match List - I with List - II :

**List - I** **List - II**  
**(Complexes)** **(Types)**

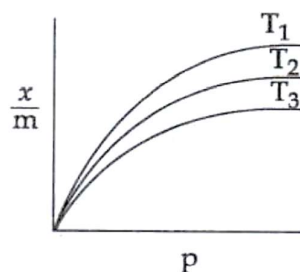
- (a)  $[\text{Co}(\text{NH}_3)_5\text{NO}_2]\text{Cl}_2$  (i) ionisation  
and  $[\text{Co}(\text{NH}_3)_5\text{ONO}]\text{Cl}_2$  isomerism  
(b)  $[\text{Cr}(\text{NH}_3)_6][\text{Co}(\text{CN})_6]$  (ii) coordination  
and  $[\text{Cr}(\text{CN})_6][\text{Co}(\text{NH}_3)_6]$  isomerism  
(c)  $[\text{Co}(\text{NH}_3)_5(\text{SO}_4)]\text{Br}$  (iii) linkage  
and  $[\text{Co}(\text{NH}_3)_5\text{Br}]\text{SO}_4$  isomerism  
(d)  $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_3$  and (iv) solvate  
 $[\text{Cr}(\text{H}_2\text{O})_5\text{Cl}]\text{Cl}_2 \cdot \text{H}_2\text{O}$  isomerism

Choose the **correct answer** from the options given below :

- (1) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)  
(2) (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)  
(3) (a) - (ii), (b) - (iii), (c) - (iv), (d) - (i)  
(4) (a) - (iii), (b) - (ii), (c) - (i), (d) - (iv)

Answer (4)

66. Shown below are adsorption isotherms for a gas 'X' at temperatures  $T_1$ ,  $T_2$  and  $T_3$  :



$p$  and  $\frac{x}{m}$  represent pressure and extent of adsorption, respectively. The correct order of temperatures for the given, adsorption is :

- (1)  $T_1 = T_2 > T_3$   
(2)  $T_1 > T_2 > T_3$   
(3)  $T_3 > T_2 > T_1$   
(4)  $T_1 = T_2 = T_3$

Answer (3)

67. 0.01 M acetic acid solution is 1% ionised, then pH of this acetic acid solution is :

- (1) 1 (2) 3  
(3) 2 (4) 4

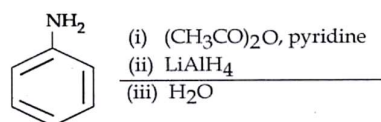
Answer (4)

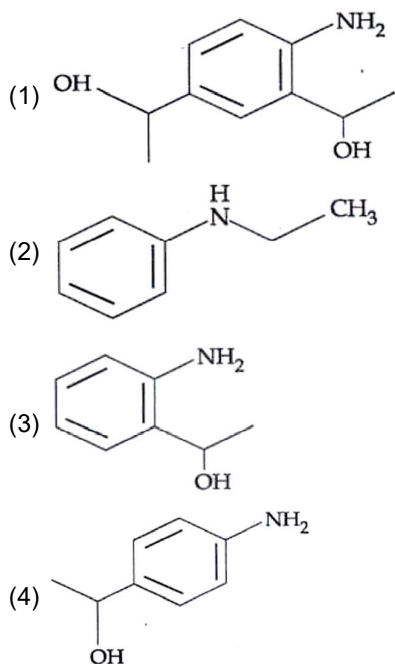
68. The half life of a first order reaction is 2000 years. If the concentration after 8000 years is 0.02 M, then the initial concentration was:

- (1) 0.04 M (2) 0.16 M  
(3) 0.32 M (4) 0.08 M

Answer (3)

69. The product formed from the following reaction sequence is :





Answer (2)

70. The decreasing order of boiling points of the following alkanes is :

- heptane
- butane
- 2-methylbutane
- 2-methylpropane
- hexane

Choose the correct answer from the options given below :

- (a) > (e) > (c) > (b) > (d)
- (a) > (c) > (e) > (d) > (b)
- (c) > (d) > (a) > (e) > (b)
- (a) > (e) > (b) > (c) > (d)

Answer (1)

71. The element used for welding metals with high melting points is :

- He
- Cl<sub>2</sub>
- H<sub>2</sub>
- Ne

Answer (3)

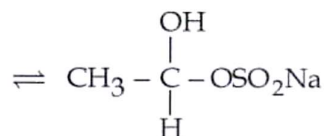
72. Decrease in size from left to right in actinoid series is greater and gradual than that in lanthanoid series due to :

- 5 f orbitals have greater shielding effect
- 4 f orbitals are penultimate
- 4 f orbitals have greater shielding effect
- 5 f orbitals have poor shielding effect

Answer (4)

73. Which of the following reactions is not an example for nucleophilic addition - elimination reaction ?

- $\text{CH}_3\text{CHO} + \text{NH}_3 \rightleftharpoons \text{CH}_3\text{CH} = \text{NH} + \text{H}_2\text{O}$
- $\text{CH}_3\text{CHO} + \text{NaHSO}_3$



- $\text{CH}_3\text{CHO} + \text{NH}_2\text{OH} \rightleftharpoons \text{CH}_3\text{CH} = \text{N} - \text{OH} + \text{H}_2\text{O}$
- $\text{CH}_3\text{CHO} + \text{C}_6\text{H}_5\text{NHNH}_2 \rightleftharpoons \text{CH}_3\text{CH} = \text{N} - \text{NHC}_6\text{H}_5 + \text{H}_2\text{O}$

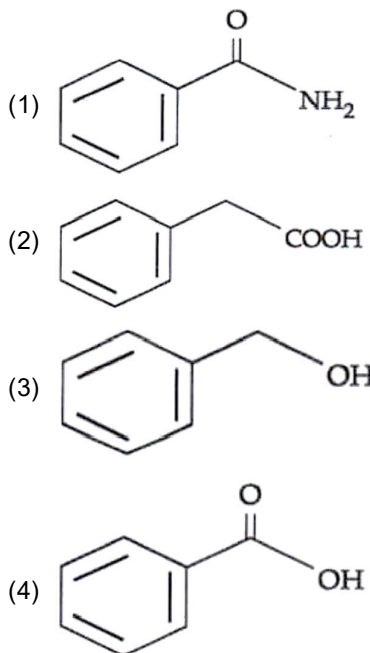
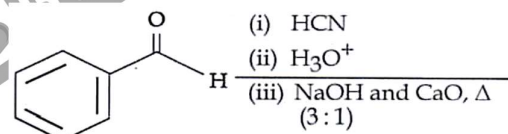
Answer (2)

74. CaCl<sub>2</sub> and Ca(OCl)<sub>2</sub> are components of :

- lime water
- gypsum
- Portland cement
- bleaching powder

Answer (4)

75. The product formed from the following reaction sequence is :



Answer (3)

76. Flourine is a stronger oxidising agent than chlorine because:

- (a) F-F bond has a low enthalpy of dissociation.
- (b) Flouride ion ( $F^-$ ) has high hydration enthalpy.
- (c) Electron gain enthalpy of flourine is less negative than chlorine.
- (d) Flourine has a very small size.

Choose the **most appropriate** answer from the options given:

- (1) (b) and (c) only      (2) (a) and (b) only
- (3) (a) and (c) only      (4) (a) and (d) only

Answer (2)

77.  $K_H$  value for some gases at the same temperature 'T' are given :

gas	$K_H/k \text{ bar}$
Ar	40.3
$CO_2$	1.67
HCHO	$1.83 \times 10^{-5}$
$CH_4$	0.413

where  $K_H$  is Henry's Law constant in water. The order of their solubility in water is :

- (1)  $HCHO < CH_4 < CO_2 < Ar$
- (2)  $Ar < CO_2 < CH_4 < HCHO$
- (3)  $Ar < CO_2 < CH_4 < HCHO$
- (4)  $HCHO < CO_2 < CH_4 < Ar$

Answer (2)

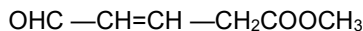
$$\text{Solubility of a gas} \propto \frac{1}{K_H \text{ value}}$$

78. Which of the following reactions is a decomposition redox reaction ?

- (1)  $P_4(s) + 3OH^-(aq) + 3H_2O(l) \rightarrow PH_3(g) + 3H_2PO_2^-(aq)$
- (2)  $2Pb(NO_3)_2(s) \rightarrow 2PbO(s) + 4NO_2(g) + O_2(g)$
- (3)  $N_2(g) + O_2(g) \rightarrow 2NO(g)$
- (4)  $Cl_2(g) + 2OH^-(aq) \rightarrow ClO^-(aq) + Cl^-(aq) + H_2O(l)$

Answer (2)

79. What is the hybridization shown by  $C_1$  and  $C_2$  carbons, respectively in the given compound?



- (1)  $sp^3$  and  $sp^3$       (2)  $sp^2$  and  $sp^3$
- (3)  $sp^2$  and  $sp^2$       (4)  $sp^3$  and  $sp^2$

Answer (2)

80. Match the reagents (**List - I**) with the product (**List - II**) obtained from phenol.

**List-I**

**List - II**

- (a) (i) NaOH (ii)  $CO_2$  (i) Benzoquinone (iii)  $H^+$

- (b) (i) Aqueous NaOH (ii) Benzene +  $CHCl_3$  (ii)  $H^+$

- (c) Zn dust,  $\Delta$  (iii) Salicyl aldehyde

- (d)  $Na_2Cr_2O_7$ ,  $H_2SO_4$  (iv) Salicylic acid

Choose the **correct answer** from the options given below:

- (1) (a) - (iv), (b) - (ii), (c) - (i), (d) - (iii)
- (2) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)
- (3) (a) - (ii), (b) - (i), (c) - (iv), (d) - (iii)
- (4) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)

Answer (4)

81. The correct order of bond angles in the following compounds/ species is :

- (1)  $CO_2 < NH_3 < H_2O < NH_4^+$
- (2)  $H_2O < NH_3 < NH_4^+ < CO_2$
- (3)  $H_2O < NH_4^+ < NH_3 < CO_2$
- (4)  $H_2O < NH_4^+ = NH_3 < CO_2$

Answer (2)

82. Match **List - I** with **List - II**:

**List - I**

**List - II**

**(Reaction)**

**(Product formed)**

- (a) Gabriel synthesis (i) Benzaldehyde
- (b) Kolbe synthesis (ii) Ethers
- (c) Williamson synthesis (iii) Primary amines
- (d) Etard reaction (iv) Salicylic acid

Choose the correct answer from the options given below

- (1) (a) - (iii), (b) - (iv), (c) - (ii), (d) - (i)  
 (2) (a) - (iii), (b) - (i), (c) - (ii), (d) - (iv)  
 (3) (a) - (ii), (b) - (iii), (c) - (i), (d) - (iv)  
 (4) (a) - (iv), (b) - (iii), (c) - (i), (d) - (ii)

Answer (1)

83. If first ionization enthalpies of elements X and Y are  $419 \text{ kJ mol}^{-1}$  and  $590 \text{ kJ mol}^{-1}$ , respectively and second ionization enthalpies of X and Y are  $3069 \text{ kJ mol}^{-1}$  and  $1145 \text{ kJ mol}^{-1}$ , respectively.

Then **correct statement** is :

- (1) Both X and Y are alkaline earth metals.  
 (2) X is an alkali metal and Y is an alkaline earth metal.  
 (3) X is an alkaline earth metal and Y is an alkali metal.  
 (4) Both X and Y are alkali metals.

Answer (2)

84. The **incorrect** statement about denaturation of proteins is :

- (1) Uncoiling of the helical structure takes place.  
 (2) It results due to change of temperature and/or pH  
 (3) It results in loss of biological activity of proteins.  
 (4) A protein is formed from amino acids linked by peptide bonds.

Answer (4)

85. Four gas cylinders containing He,  $\text{N}_2$ ,  $\text{CO}_2$  and  $\text{NH}_3$  gases separately are gradually cooled from a temperature of 500 K. Which gas will liquify first ?

(Given  $T_c$  in K - He : 5.3,  $\text{N}_2$  : 126,  $\text{CO}_2$  : 304.1 and  $\text{NH}_3$  : 405.5)

- (1)  $\text{NH}_3$   
 (2) He  
 (3)  $\text{N}_2$   
 (4)  $\text{CO}_2$

Answer (1)

### Chemistry: Section-B (Q. No. 86 to 100)

86. Given below are two statements: one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

**Assertion (A)** : The metal carbon bond in metal carbonyls possesses both  $\sigma$  and  $\pi$  character.

**Reason (R)**: The ligand to metal bond is a  $\pi$  bond and metal to ligand bond is a  $\sigma$  bond.

In the Light of the above statements, choose the **most appropriate** answer from the options given below:

- (1) (A) is not correct but (R) is correct  
 (2) Both (A) and (R) are correct and (R) is the correct explanation of (A)  
 (3) Both (A) and (R) are correct but (R) is not the correct explanation of (A)  
 (4) (A) is correct but (R) is not correct

Answer (4)

87. Match List - I with List - II:

#### List - I

- (a) Biochemical oxygen demand  
 (b) Photochemical smog  
 (c) Classical smog  
 (d) Ozone layer depletion

#### List - II

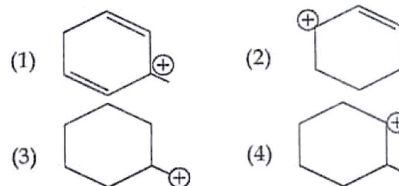
- (i) oxidising mixture  
 (ii) polar stratospheric cloud  
 (iii) organic matter In water  
 (iv) reducing mixture

Choose the **correct answer** from the options given below:

- (1) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)  
 (2) (a) - (i), (b) - (iv), (c) - (ii), (d) - (iii)  
 (3) (a) - (iii), (b) - (iv), (c) - (i), (d) - (ii)  
 (4) (a) - (iii), (b) - (i), (c) - (iv), (d) - (ii)

Answer (4)

88. Which of the following is the most stable carbocation?



Answer (1)

89. Given below are two statements :

**Statement I :**  $\text{Cr}^{2+}$  is oxidising and  $\text{Mn}^{3+}$  is reducing in nature.

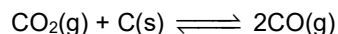
**Statement II:**  $\text{Sc}^{3+}$  compounds are repelled by the applied magnetic field.

In the light of the above statements, choose the **most appropriate** answer from the options given below:

- (1) Statement I is incorrect but Statement II is correct
- (2) Both Statement I and Statement II are correct
- (3) Both Statement I and Statement II are incorrect
- (4) Statement I is correct but Statement II is incorrect

Answer (1)

90.  $K_p$  for the following reaction is 3.0 at 1000 K.



What will be the value of  $K_c$  for the reaction at the same temperature ?

(Given –  $R = 0.083 \text{ L bar K}^{-1} \text{ mol}^{-1}$ )

- (1) 3.6
- (2) 0.36
- (3)  $3.6 \times 10^{-2}$
- (4)  $3.6 \times 10^{-3}$

Answer (3)

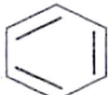
91. A vessel contains 3.2 g of dioxygen gas at STP (273.15 K and 1 atm pressure). The gas is now transferred to another vessel at constant temperature, where pressure becomes one third of the original pressure. The volume of new vessel in L is:

(Given - molar volume at STP is 22.4 L)

- (1) 67.2
- (2) 6.72
- (3) 2.24
- (4) 22.4

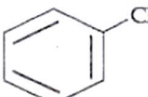
Answer (2)

92. Which one of the following reaction sequence is **incorrect** method to prepare phenol?

- (1)  , oleum, NaOH,  $\text{H}_3\text{O}^+$

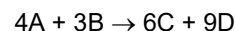
(2) Aniline,  $\text{NaNO}_2 + \text{HCl}$ ,  $\text{H}_2\text{O}$ , heating

(3) Cumene,  $\text{O}_2$ ,  $\text{H}_3\text{O}^+$

(4)  , NaOH, STP condition

Answer (4)

93. For a chemical reaction

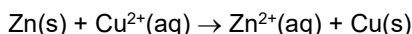


rate of formation of C is  $6 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$  and rate of disappearance of A is  $4 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$ . The rate of reaction and amount of B consumed in interval of 10 seconds, respectively will be :

- (1)  $10 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$   
and  $30 \times 10^{-2} \text{ mol L}^{-1}$
- (2)  $1 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$   
and  $30 \times 10^{-2} \text{ mol L}^{-1}$
- (3)  $10 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$   
and  $10 \times 10^{-2} \text{ mol L}^{-1}$
- (4)  $1 \times 10^{-2} \text{ mol L}^{-1} \text{ s}^{-1}$   
and  $10 \times 10^{-2} \text{ mol L}^{-1}$

Answer (2)

94. Standard electrode potential for the cell with cell reaction



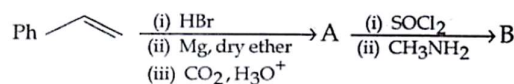
is 1.1 V. Calculate the standard Gibbs energy change for the cell reaction.

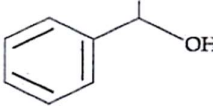
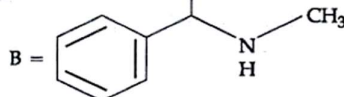
(Given  $F = 96487 \text{ C mol}^{-1}$ )

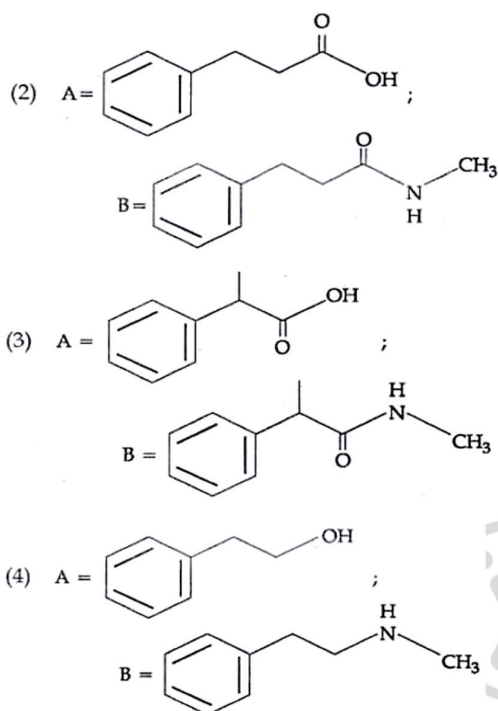
- (1)  $-200.27 \text{ J mol}^{-1}$
- (2)  $-200.27 \text{ kJ mol}^{-1}$
- (3)  $-212.27 \text{ kJ mol}^{-1}$
- (4)  $-212.27 \text{ J mol}^{-1}$

Answer (3)

95. The products A and B in the following reaction sequence are :



- (1) A =  ;  
B = 



Answer (3)

96. Which one of the following is not a calcination reaction?

- (1)  $\text{CaCO}_3 + 2\text{HCl} \xrightarrow{\Delta} \text{CaCl}_2 + \text{H}_2\text{O} + \text{CO}_2$   
 (2)  $\text{ZnCO}_3 \xrightarrow{\Delta} \text{ZnO} + \text{CO}_2$   
 (3)  $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O} \xrightarrow{\Delta} \text{Fe}_2\text{O}_3 + x\text{H}_2\text{O}$   
 (4)  $\text{CaCO}_3 \cdot \text{MgCO}_3 \xrightarrow{\Delta} \text{CaO} + \text{MgO} + 2\text{CO}_2$

Answer (1)

97. The **incorrect** method for the synthesis of alkenes is :

- (1) treating vicinal dihalides with Zn metal  
 (2) treatment of alkynes with Na in liquid  $\text{NH}_3$   
 (3) heating alkyl halides with alcoholic KOH  
 (4) treating alkyl halides in aqueous KOH solution

Answer (4)

98. When electromagnetic radiation of wavelength 300 nm falls on the surface of a metal, electrons are emitted with the kinetic energy of

$1.68 \times 10^5 \text{ J mol}^{-1}$ . What is the minimum energy needed to remove an electron from the metal ?

( $h = 6.626 \times 10^{-34} \text{ Js}$ ,  $c = 3 \times 10^8 \text{ ms}^{-1}$ ,  
 $N_A = 6.022 \times 10^{23} \text{ mol}^{-1}$ )

- (1)  $2.31 \times 10^5 \text{ J mol}^{-1}$   
 (2)  $2.31 \times 10^6 \text{ J mol}^{-1}$   
 (3)  $3.84 \times 10^4 \text{ J mol}^{-1}$   
 (4)  $3.84 \times 10^{-19} \text{ J mol}^{-1}$

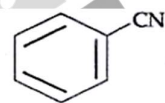
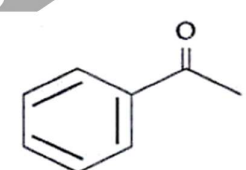
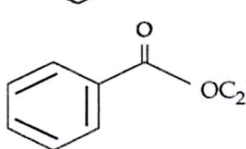
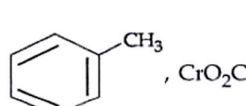
Answer (1)

99. What fraction of Fe exists as Fe(III) in  $\text{Fe}_{0.96}\text{O}$ ? (Consider  $\text{Fe}_{0.96}\text{O}$  to be made up of Fe(II) and Fe(III) only)

- (1)  $\frac{1}{20}$  (2)  $\frac{1}{12}$   
 (3) 0.08 (4)  $\frac{1}{16}$

Answer (2)

100. The incorrect method to synthesize benzaldehyde is :

- (1)  ,  $\text{CH}_3\text{MgBr}$ , followed by  $\text{H}_3\text{O}^+$   
 (2)  ,  $\text{Cl}$ ,  $\text{H}_2$ ,  $\text{Pd-BaSO}_4$   
 (3)  , DIBAL-H, followed by  $\text{H}_2\text{O}$   
 (4)  ,  $\text{CrO}_2\text{Cl}_2$ , followed by  $\text{H}_3\text{O}^+$  in  $\text{CS}_2$

Answer (1)

