

Chemistry Model Question Paper - 11

Question 1 :

Identify the ore not containing iron

(A) chalcopyrites

(B) carnallite

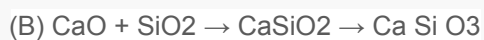
(C) siderite

(D) limonite

Answer: (B)

Question 2 :

Identify the reaction that does not take place in a blast furnace.



Answer: (C)

Question 3 :

If $n = 6$, the correct sequence of filling of electrons will be

(A) $ns \rightarrow np(n-1)d \rightarrow (n-2)f$

(B) $ns \rightarrow n(n-2)f \rightarrow (n-1)d \rightarrow np$

(C) $ns \rightarrow (n-1)d \rightarrow (n-2)f \rightarrow np$

(D) $ns \rightarrow (n-2)f \rightarrow np \rightarrow (n-1)d$

Answer: (B)

Question 4 :

If one mole of ammonia and one mole of hydrogen chloride are mixed in a closed container to form ammonium chloride gas, then

(A) $\Delta H > \Delta u$

(B) $\Delta H = \Delta u$

(C) $\Delta H < \Delta u$

(D) there is no relationship

Answer: (C)

Question 5 : If the E_{cell}° for a given reaction has a negative value, then which of the following gives the correct relationships for the values of ΔG° and K_{eq} ?

- (A) $\Delta G^{\circ} > 0$; $K_{\text{eq}} < 1$
- (B) $\Delta G^{\circ} > 0$; $K_{\text{eq}} > 1$
- (C) $\Delta G^{\circ} < 0$; $K_{\text{eq}} > 1$
- (D) $\Delta G^{\circ} < 0$; $K_{\text{eq}} < 1$

Answer: (A)

Question 6 :

If the enthalpy change for the transition of liquid water to steam is 30 kJ mol^{-1} at 27°C , the entropy change for the process would be

- (A) $100 \text{ J mol}^{-1} \text{ K}^{-1}$
- (B) $10 \text{ J mol}^{-1} \text{ K}^{-1}$
- (C) $1.0 \text{ J mol}^{-1} \text{ K}^{-1}$
- (D) $0.1 \text{ J mol}^{-1} \text{ K}^{-1}$

Answer: (A)

Question 7 :

If x is amount of adsorbate and m is amount of adsorbent, which of the following relations is not related to adsorption process?

(A) $\frac{x}{m} = P \times T$

(B) $\frac{x}{m} = f(p)$ at constant T

(C) $\frac{x}{m} = f(T)$ at constant p

(D) $p = f(T)$ at constant $\left(\frac{x}{m}\right)$

Answer: (A)

Question 8 :

In acetylene molecule, between the carbon atoms there are

(A) three sigma bonds

(B) two sigma and one pi bonds

(C) one sigma and two pi bonds

(D) three pi bonds

Answer: (C)

Question 9 :

In the alkaline medium, alanine exists predominantly as/in _____.

(A) zwitterion

(B) anion

(C) covalent form

(D) cation

Answer: (B)

Question 10 :

In chromite ore, the oxidation number of iron and chromium are respectively _____.

(A) +3, +6

(B) +3, +2

(C) +2, +3

(D) +2, +6

Answer: (C)

