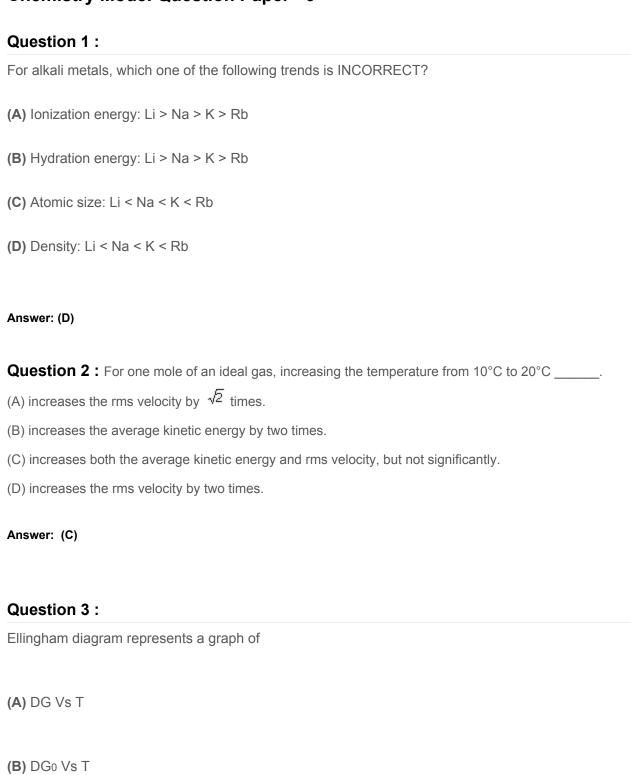
## **Chemistry Model Question Paper - 9**

(C) DS Vs P



(D) DG Vs P

Answer: (B)

## Question 4:

For the four successive transition elements (Cr, Mn, Fe and Co), the stability of + 2 oxidation state will be there in which of the following order?

- (A) Cr > Mn > Co > Fe
- (B) Mn > Fe > Cr > Co
- (C) Fe > Mn > Co > Cr
- **(D)** Co > Mn > Fe > Cr

(At. nos. Cr = 24, Mn = 25, Fe = 26, Co = 27)

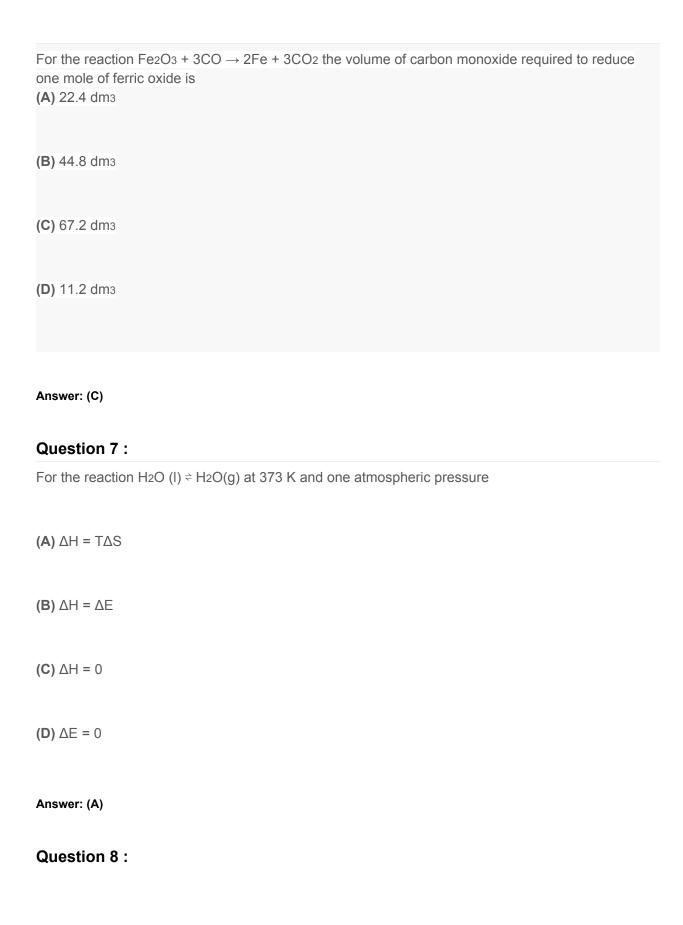
Answer: (B)

**Question 5 :** For the reaction 2HI(g) = H2(g) + I2(g) - Q KJ , the equilibrium constant depends upon (A) temperature

- (B) pressure
- (C) catalyst
- (D) volume

Answer: (A)

Question 6:



For the reaction N2(g) + O2(g)  $\stackrel{?}{=}$  2NO(g), the equilibrium constant is K1. The equilibrium constant is K2 for the reaction 2NO(g) + O2(g)  $\stackrel{?}{=}$  2NO2(g).

 $\label{eq:What is K for the reaction NO2(g) = 0} \frac{1}{2} \frac{1}{\text{N2(g)} + \text{O2(g)}?}$  What is K for the reaction NO2(g) = 0

$$_{(A)} \ \frac{1}{(K_1 K_2)}$$

$$_{(B)} \frac{1}{(2K_1K_2)}$$

(C) 
$$\frac{1}{(4K_1K_2)}$$

$$(D) \left[\frac{1}{K_1K_2}\right]^{1/2}$$

Answer: (D)

## Question 9:

For the reversible reaction
$A(s) + B(g) = C(g) + D(g)$ : $DG_0 = -350kJ$ .
Which one of the following statements is true?
(A) Equilibrium constant is greater than one.
(B) The entropy change is negative.
(C) The reaction is thermodynamically not feasible.
(D) The reaction should be instantaneous.
Answer: (A)
Answer: (A)  Question 10:
Question 10 :
Question 10:  Formation of coloured solution is possible when metal ion in the compound contains

(D) none of these

Answer: (B)