

**$K_p$  &  $K_c$  Relationship and****Characteristics of  $K$** 

61. For reaction,  $2A(g) \rightleftharpoons 3C(g) + D(s)$ , the value of  $K_c$  will be equal to

(a)  $K_p(RT)$   
 (b)  $K_p/RT$   
 (c)  $= K_p$   
 (d) None of these

62. In the reaction,  $A_2(g) + 4B_2(g) \rightleftharpoons 2AB_4(g)$

$\Delta H < 0$  the formation of  $AB_4$  is will be favoured at

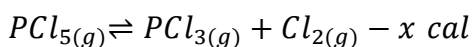
(a) Low temperature, high pressure  
 (b) High temperature, low pressure  
 (c) Low temperature, low pressure  
 (d) High temperature, high pressure

63. The formation of  $SO_3$  takes place according to the following reaction,  $2SO_2 + O_2 \rightleftharpoons 2SO_3$ ;  $\Delta H = -45.2 \text{ kcal}$

The formation of  $SO_3$  is favoured by

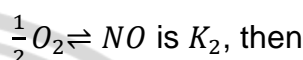
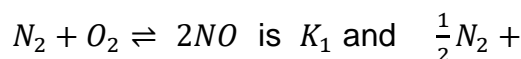
(a) Increasing in temperature  
 (b) Removal of oxygen  
 (c) Increase of volume  
 (d) Increasing of pressure

64. What is the effect of increasing pressure on the dissociation of  $PCl_5$  according to the equation



(a) Dissociation decreases  
 (b) Dissociation increases  
 (c) Dissociation does not change  
 (d) None of these

65. If equilibrium constants of reaction,



(a)  $K_1 = K_2$  (b)  $K_2 = \sqrt{K_1}$   
 (c)  $K_1 = 2K_2$  (d)  $K_1 = \frac{1}{2}K_2$

66. For the following reaction in gaseous phase  $CO + \frac{1}{2}O_2 \rightarrow CO_2$ ;

$K_p/K_c$  is

(a)  $(RT)^{1/2}$  (b)  $(RT)^{-1/2}$   
 (c)  $(RT)$  (d)  $(RT)^{-1}$

67. For the reaction  $N_{2(g)} + O_{2(g)} \rightleftharpoons 2NO_{(g)}$ , the value of  $K_c$  at  $800^\circ C$  is 0.1. When the equilibrium

concentrations of both the reactants is 0.5 mol, what is the value of  $K_p$  at the same temperature

(a) 0.5 (b) 0.1  
 (c) 0.01 (d) 0.025

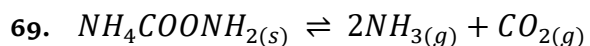
68.  $A_{(g)} + 3B_{(g)} \rightleftharpoons 4C_{(g)}$ . Starting concentration of A is equal to B,



equilibrium concentration of A and C

are same.  $K_c =$

- (a) 0.08                      (b) 0.8  
(c) 8                          (d) 80  
(e) 1/8



if equilibrium pressure is 3 atm for the above reaction  $K_p$  for the reaction is

- (a) 4                          (b) 27  
(c) 4/27                      (d) 1/27

