*Q.27. For a reaction taking place in a container in equilibrium with its surroundings, the effect of temperature on its equilibrium constant K in terms of change in entropy is described by

[A] With increase in temperature, the value of K for exothermic reaction decreases because entropy change of the system is positive

[B] With increase in temperature, the value of K for endothermic reaction increases because unfavourable change in entropy of the surroundings decreases

[C] With increase in temperature, the value of K for endothermic reaction increases because the entropy change of the system is negative

[D] With increase in temperature, the value of K for exothermic reaction decreases because favourable change in entropy of the surrounding decreases

Sol. **B, D**

[B] With increase in temperature, the value of K for endothermic reaction increases because unfavourable change in entropy of the surroundings decreases

[D] With increase in temperature, the value of K for exothermic reaction decreases because favourable change in entropy of the surrounding decreases