

D.B. College (Jaynagar) lett-12  
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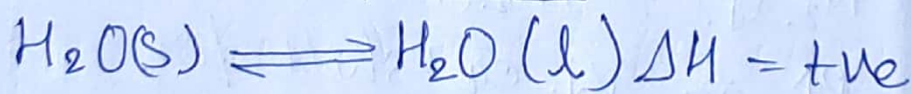
Ques  $C(s) + CO_2(g) \rightleftharpoons 2CO(g)$  forward  
which of the following is favourable  
Cond<sup>n</sup> for form of CO?

- ① 200 atm, 300K      ② 100 atm, 300K  
③ 300 atm, 300K      ④ 50 atm, 300K

$P \downarrow$  moles  $\uparrow$  forward

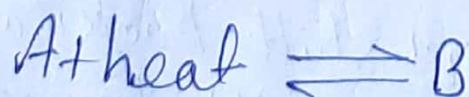
3. Temperature:-

① Endothermic react<sup>n</sup>

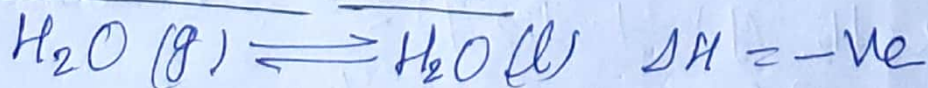


$T \uparrow$  react<sup>n</sup> moves forward

$T \downarrow$  react<sup>n</sup> moves backward

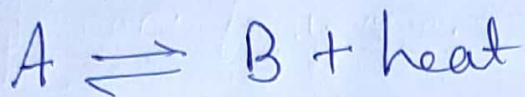


② Exothermic react<sup>n</sup>



$T \uparrow$  react<sup>n</sup> moves backward

$T \downarrow$  react<sup>n</sup> moves forward



4. Effect of Addition of an Inert Gas:-

$P \propto n$   
 $\frac{P}{n} = \text{const.}$

at Const. Vol  $\Delta V = 0$

$$V = \text{Const } n \uparrow P \uparrow$$

$K_p \rightarrow$  Partial Pr.

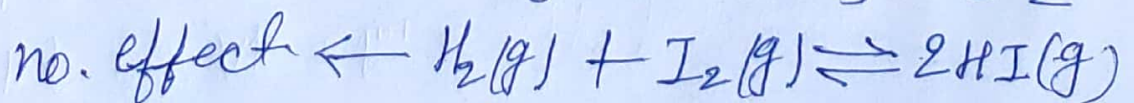
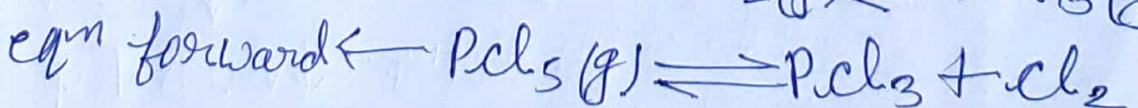
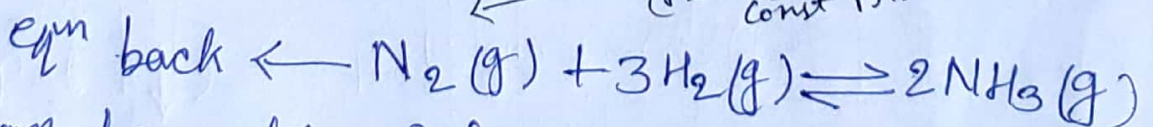
$$\text{Partial Pr.} = \frac{n}{n \uparrow} \times (P_T) \uparrow$$

$$\text{Partial Pr.} = \text{Const}$$

\* There is no effect on eq<sup>m</sup> on addition of inert gas at Const. Volume

~~Partial Pr. ↓ eq. shift~~  
in ad<sup>n</sup> where no. of gaseous moles are more

← add inert gas (He/Ne) at const pr.



5. Effect of Catalyst:-

Catalyst does not affect eq<sup>m</sup>.

Catalyst only change rate of reaction

↓ energy barrier

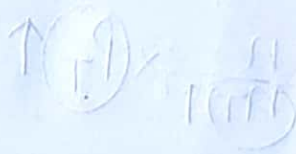
Rate of reaction ↑

Effect of temperature on rate of reaction

As temperature increases, the rate of reaction increases exponentially.

Temperature ↑  
Rate of reaction ↑

Temperature ↓  
Rate of reaction ↓



Energy barrier

Reaction rate is affected by temperature.

Higher temperature increases the rate of reaction.

Lower temperature decreases the rate of reaction.

Temperature affects the rate of reaction.

Temperature ↑  
Rate of reaction ↑

Temperature ↓  
Rate of reaction ↓

Temperature ↑  
Rate of reaction ↑

Temperature ↓  
Rate of reaction ↓

Temperature ↑  
Rate of reaction ↑

Temperature ↓  
Rate of reaction ↓