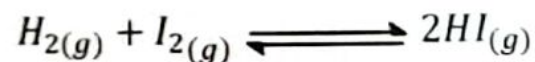


REVIEW QUESTIONS

1. Encircle the correct answer.

- (i) Which is true about the equilibrium state?
- (a) The forward reaction stops.
 - (b) The reverse reaction stops.
 - (c) Both forward and reverse reactions stop.
 - ☒ (d) Both forward and reverse reactions continue at the same rate.
- (ii) When a mixture of H_2 and I_2 is sealed in a flask and temperature is kept at 25°C , following equilibrium is established.



Which substance or substances will be present in the equilibrium mixture?

- (a) H_2 and I_2
 - (b) HI only
 - (c) H_2 only
 - ☒ (d) H_2 , I_2 and HI
- (iii) Concentration of reactants and products at equilibrium remains unchanged if
- (a) concentration of any reactant or product is not changed.
 - (b) temperature of the reaction is not changed.
 - (c) pressure or volume of the system is not changed.
 - ☒ (d) all of the above are observed

- (iv) Which of the following does not happen, when a system is at equilibrium state?
- ☒ (a) forward and reverse reactions stop.
 - (b) forward and reverse rates become equal.
 - (c) concentration of reactants and products stop changing.
 - (d) reaction continues to occur in both the directions.
- (v) In an irreversible reaction equilibrium is
- (a) established quickly
 - (b) established slowly
 - ☒ (c) never established
 - (d) established when reaction stops.

2. Give short answer.

- (i) Differentiate between forward and reverse reactions

CHEMICAL EQUILIBRIUM

Review Questions :

* Give Short Answers

1. Differentiate between forward and reverse reaction.

Forward reaction

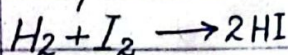
It is the reaction which is written from left to right.

Reactants produce products in this reaction.

It is a single arrow moving left to right.



example :



Reverse reaction

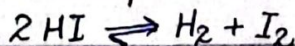
It is the reaction which is written from right to left.

Products produce reactants in this reaction.

It is a double headed arrow moving in both directions.

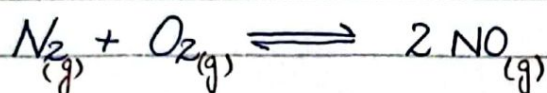


example :

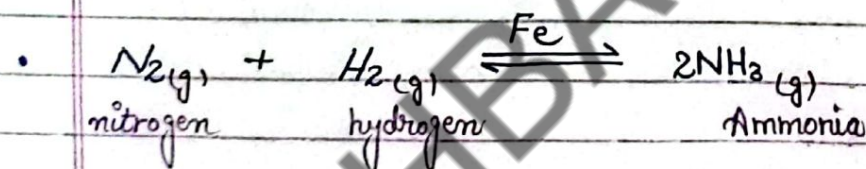
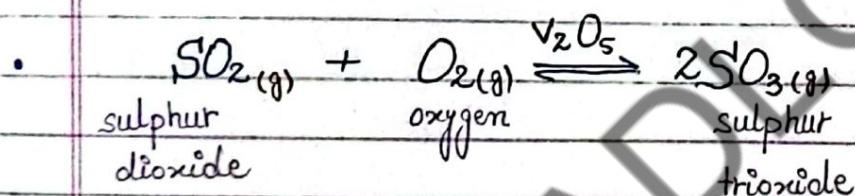


2. What is a chemical equilibrium?

The state of a chemical reaction where the forward and reverse reaction occur at the same rate is called chemical equilibrium. Chemical equilibrium is dynamic equilibrium as reaction do not stop when they reach equilibrium.



3. Write two chemical equations of reversible reaction.



4. Write down the conditions for equilibrium?

Conditions for equilibrium are:-

- Concentration of none of the reactants or product is changed.
- The temperature of the system remained constant.
- The pressure or volume of system remains constant.

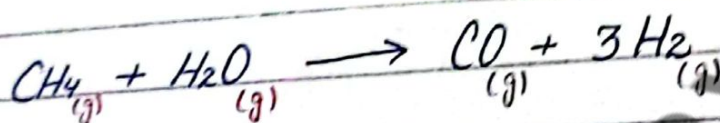
Questions no 03:



* Write forward reaction for this equation.



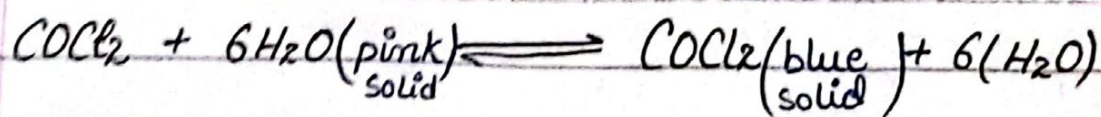
* Write reverse reaction for this equation.



Question no 04:

How does temperature effect cobalt chloride equilibrium?

Hydrated cobalt(II) chloride is a pink solid. When heated it loses water and become anhydrous cobalt(II) chloride, a blue solid. So the equilibrium shifts towards right. But when water is added to it, it absorbs water and the equilibrium shifts to the left to form hydrate cobalt(II) again.



THINK TANK

Bromine chloride (BrCl) decomposes to form chlorine and bromine.

Write reversible reaction for this.

