

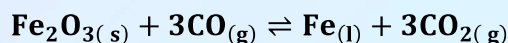
sulphate

- (3) make the medium strongly acidic
- (4) increase the rate of formation of crystals

Ans.(1)

Sol. Fe^{+2} ions undergoes hydrolysis, therefore while preparing aqueous solution of ferrous sulphate and ammonium sulphate in water dilute sulphuric acid is added to prevent hydrolysis of ferrous sulphate.

Q21. The following reaction occurs in the Blast furnace where iron ore is reduced to iron metal



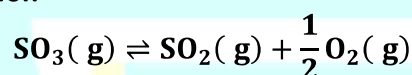
Using the Le-chatelier's principle, predict which one of the following will not disturb the equilibrium.

- (1) Addition of Fe_2O_3
- (2) Addition of CO_2
- (3) Removal of CO
- (4) Removal of CO_2

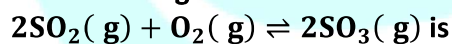
Ans.(1)

Sol. When solid added no effect on equilibrium.

Q22. The equilibrium constant for the reaction



is $K_C = 4.9 \times 10^{-2}$. The value of K_C for the reaction given below is



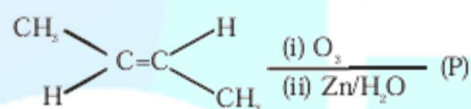
- (1) 4.9
- (2) 41.6
- (3) 49
- (4) 416

Ans.(4)

Sol. $K'_C = \left(\frac{1}{K_C}\right)^2 = \left(\frac{1}{4.9 \times 10^{-2}}\right)^2$
 $K'_C = 416.49$

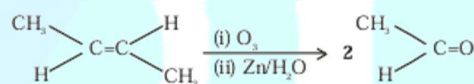
Redox Reactions

Q1. Consider the given reaction. The total number of oxygen atoms present per molecule of the product (P) is.....



Ans.(1)

Sol.



Hence total number of oxygen atom present per

molecule $\begin{array}{c} \text{CH}_3 \\ \diagdown \\ \text{C}=\text{O} \\ \diagup \\ \text{H} \end{array}$ is 1.

Q2. Anomalous behavior of oxygen is due to its

- (1) Large size and high electronegativity
- (2) Small size and low electronegativity
- (3) Small size and high electronegativity
- (4) Large size and low electronegativity

Ans.(3)

Sol.

Q3. The oxidation number of iron in the compound formed during brown ring test for NO_3^- ion is.....

Ans.(1)

Sol. $[\text{Fe}(\text{H}_2\text{O})_5(\text{NO})]^{2+}$,
 Oxidation no. of Fe = +1

Q4. Appearance of blood red colour, on treatment of the sodium fusion extract of an organic compound with FeSO_4 in