

XI Chemistry Worksheet

Time: 30 min

Ch # 1 : Redox Reactions -01

Full Marks: 20

Instructions:

1. All questions are compulsory.
2. Please give the explanation for the answer where applicable.

Q1 - Name the oxidiser and reducer in the following reaction:-



(1 Mark)

Q2 - Define oxidation number and calculate the oxidation number of Cr in $\text{K}_2\text{Cr}_2\text{O}_7$.

(2 Marks)

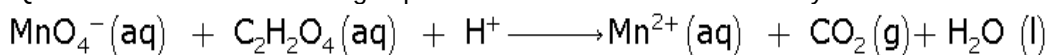
Q3 - What is the usual oxidation state of oxygen? In which type of compounds oxygen shows an oxidation no. of -1 and +2?

(1 Mark)

Q4 - What is meant by half reaction?

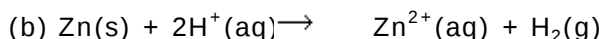
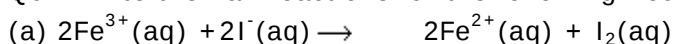
(1 Mark)

Q5 - Balance the following equation in the acidic medium by oxidation number method.



(5 Marks)

Q6 - Write the half reactions for the following Redox reaction;-



(2 Marks)

Q7 - Identify the strongest and the weakest reducing agents from the following metals:-

Zn, Cu, Ag, Na

(2 Marks)

Q8 - The standard reduction potential for Cu^{2+}/Cu is +0.34 V. Calculate the standard reduction potential at pH = 14 for the above couple K_{sp} of $\text{Cu}(\text{OH})_2$ is 1.0×10^{-19} .

(3 Marks)

Q9 - Calculate pH of the following half cell $\text{Pt}, \text{H}_2/\text{H}_2\text{SO}_4$. The oxidation potential is +0.3 V.

(3 Marks)