**COSTAATT**

**CHEM092 – Introduction to Concepts in Chemistry II**

**Lesson 7 – Worksheet**

1. Define oxidation and reduction in terms of a transfer of electrons.

2. State whether the following half reactions show oxidation or reduction:

(a) Fe2+ + 2e- Fe

(b) Fe  Fe2+ + 2e-

(c) H2  2H+ + 2e-

(d) Cu2+ + 2e-  Cu

3. Determine the oxidation number of:

(a) Cu in CuO

(b) Mn in MnO2

(c) S in H2SO4

(d) N in NH3

(e) N in N2O

4. If a mixture of zinc powder and cobalt(II) chloride is heated, the following reaction occurs:

Zn(s) + CoO(s) ZnO(s) + Co(s)

(a) Which metal is higher in the reactivity series?

(b) The zinc can be described as a reducing agent. Using this example, describe what is meant by the term *reducing agent*.

(c) Which substance in this reaction has been oxidised?