THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

CHEMISTRY(ANSWER KEY)

CWX3(2)

Reactivity Series and Electrochemistry STD X

1.

a) Mg , Zn , Al
b) Cu .Because Cu is less reactive than Fe.

2. a) Silver is coated on the surface of iron naiL
b) $Fe + 2\ AgNO_3$ ----- > $Fe\ (NO_3)_2 + 2Ag$
c) Fe
d) Ag
e) Oxidation – $Fe \longrightarrow Fe^{2+} + 2e^-$
Reduction – $Ag^+ + e^- \longrightarrow Ag$
f) Fe displaces Ag from its salt solution.

3. a) Anode : Copper
Cathode :Silver
b) Anode – Oxidation $Cu \longrightarrow Cu^{2+} + 2e^-$
c) Cathode – Reduction $Ag^+ + e^- \longrightarrow Ag$
d) Redox reaction – $Cu + 2\ Ag^+ \longrightarrow Cu^{2+} + 2\ Ag$
e)Electrons flow from Anode to cathode .Silver electrode to copper electrode.

4.

Cell	Anode	Cathode	Reaction at Anode	Reaction at Cathode	Redox reaction
Fe - Cu	Fe	Cu	$Fe \longrightarrow Fe^{2+} + 2e^-$	$Cu^{2+} + 2e^- \longrightarrow Cu$	$Fe + Cu^{2+} \longrightarrow Fe^{2+} + Cu$
Cu - Ag	Cu	Ag	$Cu \longrightarrow Cu^{2+} + 2e^-$	$2Ag^+ + 2e^- \longrightarrow 2Ag$	$Cu + Ag^+ \longrightarrow Ag + Cu^{2+}$