- 1. In the following reactions, indicate the:
 - i) species oxidized ii) species reduced iii) oxidizing agent iv) reducing agent.

(a)
$$\mathrm{Hg^{2+}} + \mathrm{Mn} \longrightarrow \mathrm{Hg} + \mathrm{Mn^{2+}}$$

(b)
$$H_2 + Sn^{4+} \longrightarrow 2H^+ + Sn^{2+}$$

(c)
$$2\text{Li} + \text{F}_2 \longrightarrow 2\text{Li}^+ + 2\text{F}^-$$

(d)
$$Br_2 + 2Cr^{2+} \longrightarrow 2Br^- + 2Cr^{3+}$$

(e)
$$2Fe^{2+} + Sn^{4+} \longrightarrow Sn^{2+} + 2Fe^{3+}$$

2.	When cesium metal is exposed to chlorine gas, a bright flash occurs as the elements react. The product, cesium chloride, is a white solid composed of cesium ions and chloride ions. (a) Write the balanced overall reaction which occurs between chlorine and cesium.
	(b) Write the half-reactions which occur and identify which half-reaction is the reduction and which is the oxidation.
	(c) Identify the reducing and oxidizing agents.