

**Revised August 2006**

**AP WORKED ANSWERS**

**2006, 8**

**Points 1, 1, 1, 1, 2, 2**

(a)  $[118] 8s^1$  or  $8s^1$

(b) Q would be a metal. It would be in group I, have one electron in its outside shell, and would lose that electron to form positive ions in its compounds – all consistent with Q being a metal.

(c) Largest. It would have the largest number of electron shells.

(d) +1

(e)  $2Q + H_2O \rightarrow 2QOH + H_2$   
(Net ionic and states not necessary)

(f)(i)  $Q_2CO_3$

(ii) It would be soluble. All group I compounds are soluble.