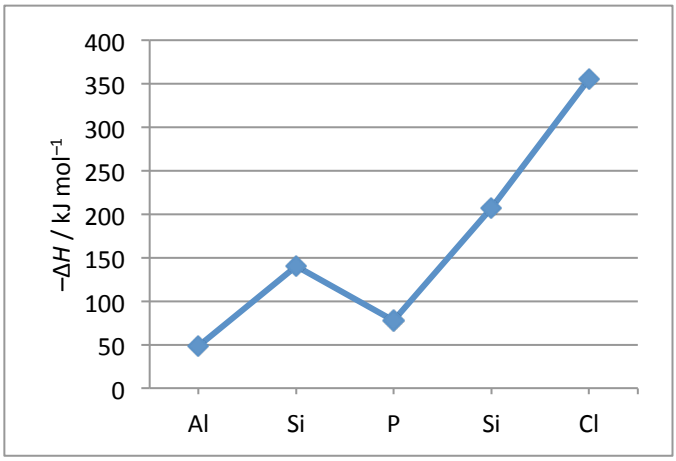
Marks 7

- Electron affinity is the enthalpy change for the reaction $A(g) + e \rightarrow A^-(g)$.
  The graph below shows the trend in electron affinities for a sequence of elements in the third row of the Periodic Table.



Give the electron configurations of the following atoms and singly-charged anions. Use [Ne] to represent core electrons.

Atom	Electron configuration	Ion	Electron configuration
Si		Si^-	
P		P^-	
S		S^-	

Explain why the value for the electron affinity of phosphorus is anomalous.

What trend would you expect for the electron affinities for Si^-, P^- and S^-? Explain your answer.