

Q1.

| Question Number | Answer | Mark |
|-----------------|--|------------------------------|
| | <p>an answer containing both of the following numbers in the correct places (1)</p> $\begin{array}{c} 99 \\ \hline 43 \end{array} \text{Tc}$ | <p>(1) AO 2 1</p> |

Q2.

| | Answer | Additional guidance | Mark |
|-------|---|--|---------------------------|
| (iii) | <p>$\begin{array}{c} 4 \\ \dots \\ 2 \\ \dots \end{array} \alpha$ (1)</p> <p>$\begin{array}{c} 237 \\ \dots \end{array} \text{Mn}$ (1)</p> <p>$\begin{array}{c} 93 \\ \dots \end{array} \text{Iv}$ (1)</p> | <p>both correct for the mark</p> <p>ecf from mp1</p> <p>ecf from mp1</p> | <p>(3) AO2</p> |

Q3.

| Question | Answer | Additional guidance | Mark |
|----------|--|---------------------|--------------------------|
| (iv) | <p>-1 for beta β (1)</p> <p>correctly balanced equation with numbers in boxes adding to 38 (1)</p> $\begin{array}{c} 90 \\ 38 \end{array} \text{Sr} \longrightarrow \begin{array}{c} 0 \\ \beta \\ \boxed{-1} \end{array} + \begin{array}{c} 90 \\ Y \\ \boxed{39} \end{array}$ | | 2 AO1.1 |