**Chapter 6 Nuclear energy. (Revision Questions page 200). Multiple Choice Answers**

| Q | Ans | Explanation |
|---|---|---|
| 1 | D | This is the definition of fission. The others are events which can happen in nuclear processes. Note that (C) is fusion. |
| 2 | D | $\Delta m = \lvert m_P - m_R \rvert$<br>$= \lvert 7.016\,929 - (3.016\,029 + 4.002\,603) \rvert$<br>$= \lvert 7.016\,929 - 7.018\,632 \rvert$<br>$= 0.001\,703$ u<br>$= 0.001\,703$ u $\times 931.5$ MeV/u<br>$= 1.59$ MeV<br>The mass of the products is less than the ass of the reactants, so some of the reactants' mass was converted to energy (and released). |
| 3 | A | Mass number is the sum of protons and neutrons in the nucleus. The others are true. |
| 4 | A | ${}^{235}_{92}\mathrm{U} + {}^{1}_{0}\mathrm{n} \rightarrow {}^{94}_{36}\mathrm{Kr} + 3{}^{1}_{0}\mathrm{n} + {}^{139}_{56}\mathrm{Ba}$ |
| 5 | D | The ones around Fe-56 are at the peak of the stability graph so are the most stable. |