

# 1<sup>st</sup> Anne's Master English Exam Correction 2022

Q<sub>1</sub>: Title to the text:  $\rightarrow$  The Nucleus - Atomic Number, Atomic Mass, And Isotops. (3)

Q<sub>2</sub>: Gaps filling:  $\rightarrow$  (1)  $\rightarrow$  Atomic number (0.5), (2) Atomic Mass (0.5), (3) Isotops (0.5)  
(4)  $\rightarrow$  The three isotops of hydrogen (0.5)

Q<sub>3</sub>: (i)  $\rightarrow$  Atomic number  $\rightarrow$  is the nb of protons in the nucleus of one atom of the element. (1)

(ii)  $\rightarrow$  The atomic mass  $\rightarrow$  is the mass of one atom of the element compared to the mass of one atom of hydrogen. (1)

(iii)  $\rightarrow$  Isotopes  $\rightarrow$  are atoms of the same element with  $\neq$  atomic mass (owing  $\neq$  nb of neutrons) (1)

Q<sub>4</sub>: Hydrogen is the element with the fewest neutrons in its atoms; 99.9% of hydrogen atoms have no neutrons at all.

Q<sub>5</sub>:

Z	Element
1	H (0.5)
6	C (0.5)

Z	Element
8	O (0.5)
14	silicon (0.5)

Z	Element
79	gold (0.5)

Q<sub>6</sub>: If you subtract the atomic nb Z from the atomic mass A, you will get the nb of neutrons in the nucleus. (1.5)

Q<sub>7</sub>: If you subtract  $Z_{Zn} = 30$ ,  $A_{Zn} = 65.4$ ,  $A_{Zn} - Z_{Zn} = 35.4$  should be the nb of neutrons. However, you can't have 0.4 of a neutron there for Zinc must have more than one common isotope and 65.4 must be the average atomic mass. (2)

Q<sub>8</sub>:  
 a  $\rightarrow$  present perfect (1.5)  
 b  $\rightarrow$  " " " (1.5)  
 c  $\rightarrow$  " " " (1.5)