

WANYANGE GIRLS' SECONDARY SCHOOL

SENIOR ~~TWO~~^{Three} CHEMISTRY

Qn 1 The following table shows the mass numbers and number of neutrons in atoms A, B, C and D.

Atom	Mass Number	Number of neutrons	Atomic Number
A	40	20	
B	45	24	
C	42	22	
D	45	22	

- (a) State what the following terms mean (3)
- Atomic number
 - Mass number
 - Isotopes
- (b) Complete the table by stating the atomic numbers of the atoms A to D. (2)
- (c) Which of the atoms in the table are isotopes?(1)
- (d) (i) What is the number of electrons in atom D? (1)
(ii) Give a reason for your answer in d (i) above.(1)
- (e) How many positive charges are in the nucleus of atom B? Give a reason for your answer.
(2)

Qn 2. An atom of bromine is written as ${}_{35}^{81}\text{Br}$.

- (a) Complete each statement: (3)
- The number of electrons in Br is ----
 - The number of protons in Br is -----
 - The number of neutrons in Br is -----
- (b) Suggest a name for the atom of bromine. (1)

Qn 3. The number of protons, electrons and neutrons in particles V, W, X, Y, Z are given in the following table:

Particle	Protons	Electrons	Neutrons
V	3	3	4
W	12	10	12
X	9	10	10
Y	17	17	20
Z	17	17	18

(a) Choose from the table the letter(s) that represent(s):(4)

- (i) A neutral atom
- (ii) A pair of isotopes
- (iii) A negative ion
- (iv) A positive ion

(b) Giving reason(s), state the atomic number of Y (2)