

Jack Maguire Chemistry Homework

Q1

(a)

C

(b)

There are 11 neutrons, 8 protons and 8 electrons. This is because the mass number is equal to the protons plus the neutrons, and the electrons are equal to the protons which are the atomic number.

(c)

Your group determines how many electrons are in your outer shell, so if two elements both have the same number of electrons in their outer shells, then they are both in the same group. Oxygen and Sulphur both have 6 electrons in their outer shells.

(d)

They are arranged in 3 outer shells, the first full of 2 electrons, the second full of 8 electrons and the third with 5 electrons.

(e)

(i) A covalent bond is where two atoms don't have full shells, so they 'share' some electrons to gain full outer shells. This is different from ionic bonding, where one atom gives electrons to another and they are bound by charge, because here they are bonded by needing a full outer shell.

(ii) 2 P, 5 O

Q2

(i)

B

(ii)

C

Q3

(a)

(i) ???

(ii) To make the electrons less likely to move?

(b)

A

(c)

(i) A Covalent bond is where two atoms share electrons in order to gain full outer electron shells.

(ii) 2.4

(iii) See Attached Picture

Q4

See Attached Picture

Q5

See Attached Picture

Q6

(i)

Ammonia + Nitric Acid \rightarrow Ammonium Nitrate

(ii)

C

(iii)

Because nitrates are essential for plant growth, and ammonium kills the weeds.