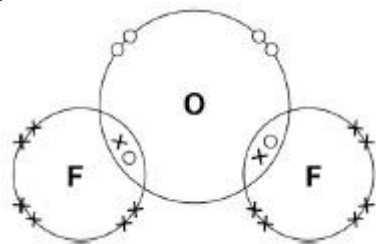


MARK SCHEMES – Chemistry Unit 2 homework

Q1 (a)	K loses	1
	one electron	1
	(to) form a positive ion	1
	F gains one electron	1
	(to) form a negative ion	1
(b)	lattice / giant structure <i>allow many ions</i>	1
	strong attraction	1
	between K^+ and F^- ions / oppositely charged ions	1
	(so) a lot of energy is needed to overcome / break <i>allow strong bonds</i>	1
Q2(a)	intermolecular	1
(b)	sulfur	1
(c)	ions	1
	fixed in solid	1
	mobile in liquid	1
(d)	layers of atoms <i>allow ions</i>	1
	slide over each other	1
(e)	copper	1

Q3 (a)



*two shared pair of electrons
all outer shells complete*

1
1

(b) gas

1

Q4 (a) carbon

allow C

1

(b) (i) (atoms are in) layers (that) can slide over each other

1

because between the layers there are only weak forces
accept because there are no (covalent) bonds between the layers
accept Van der Waals forces between the layers
*do **not** allow intermolecular bonds between the layers*
if no other marks are awarded allow weak intermolecular forces for 1 mark

1

(ii) because each atom forms four (covalent) bonds **or** (diamond is a) giant (covalent) structure **or** lattice **or** macromolecular
any reference to ionic / metallic bonding or intermolecular forces scores a maximum of 1 mark
accept carbon forms a tetrahedral shape

1

(and) covalent bonds are strong
accept covalent bonds need a lot of energy / difficult to break

1

(iii) because graphite has delocalised electrons
allow sea of electrons
allow each carbon atom has one free electron

1

which can move through the whole structure (and carry the current / charge / electricity)

1