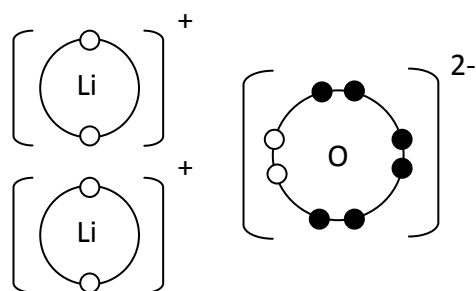


Section A: Multiple Choice

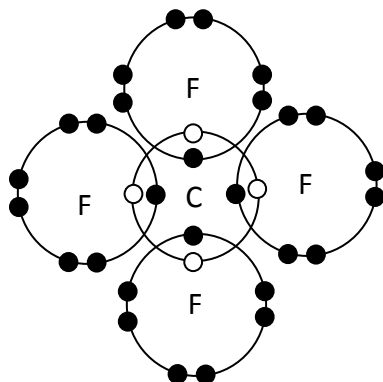
1.	D	6.	B	11.	D	16.	A
2.	A	7.	C	12.	A	17.	C
3.	B	8.	D	13.	D	18.	D
4.	B	9.	A	14.	B	19.	C
5.	A	10.	D	15.	C	20.	B

Section B: Structural Question

- 1 (a) (i) Halogens. 1
- (ii) (I) They have same number of electron shell. 1
- (II) They have different number of outermost electrons. 1
- (iii) They have the same number of outermost electrons. 1
- (b) (i) h 1
- Group VII elements react by gaining electrons 1
- the size of h is smaller than I / attraction from the nucleus is greater 1
- it is more easier to gain the electrons.
- (ii) d 1
- Group III elements react by losing electrons 1
- the size of d is bigger than c / attraction from the nucleus is weaker 1
- it is more easier to lose the electrons.
- (iii) a 1
- Both a and b react by losing electrons 1
- a needs to lose less electrons than b 1
- (c) (i) Li_2O 1

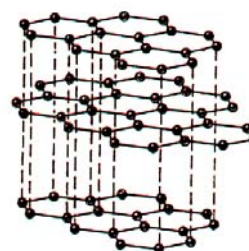
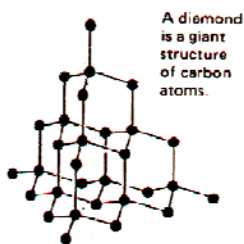


- (ii) CF_4 1



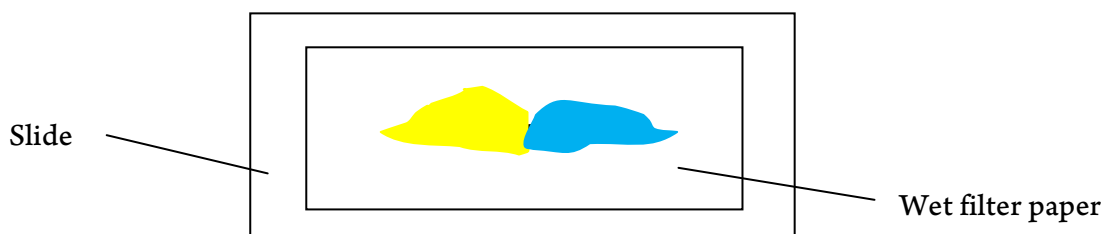
- (iii) X: Giant ionic structure
 Y: Simple molecular structure 1 mark for both correct
- (iv) (I) X can conduct electricity but Y cannot in molten or aqueous state. 1
Ions are movable/ mobile when X is in molten or aqueous state. 1
- (II) X have higher melting point and boiling point than Y. 1
Strong ionic bond are held between ions in X while
weak van der Waals' force are held between molecules in Y. 1

2 (a) Diamond Graphite 1,1



- (b) (i) There are weak van der Waal's force between the graphite layers, thus it is easy to break to bonding. 1
- (ii) Carbon atoms in diamond is held together by strong covalent bond, hugh amount of energy is needed to overcome in order to break the bonding. 1
- (iii) In graphite, one carbon atom is bonded to three others, there are one free electron left to conduct electricity. 1
 In diamond, one carbon atoms is bonded to four others, there are no free electron. 1

- 3 (a) No. 1
 Water must be present to provide a medium for ions to move/for conduct electricity. 1
- (b) Green 1
- (c) 2



- (d) Copper(II) ion, which is blue in colour, is carrying a positive charge and will be attracted to the negative pole. 1
 Chromate ion, which is yellow in colour, is carrying a negative charge and will be attracted to the positive pole. 1

4 (a) Filtration

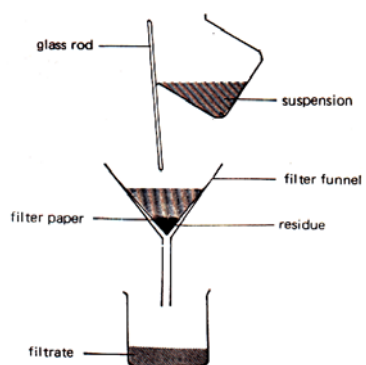
1

Distillation/ Fractional distillation

1

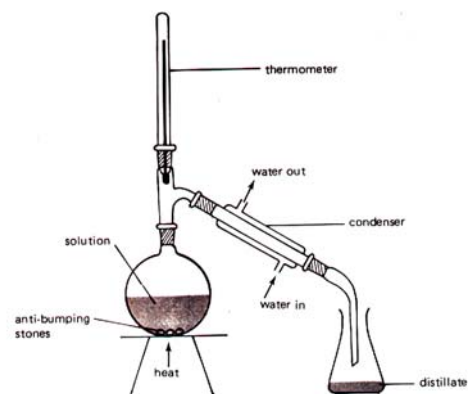
(b)

Filtration



Distillation

1,1



(c) Mixture

1