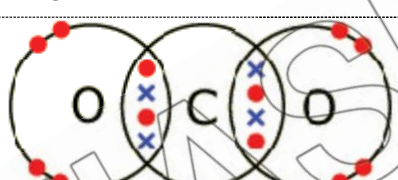
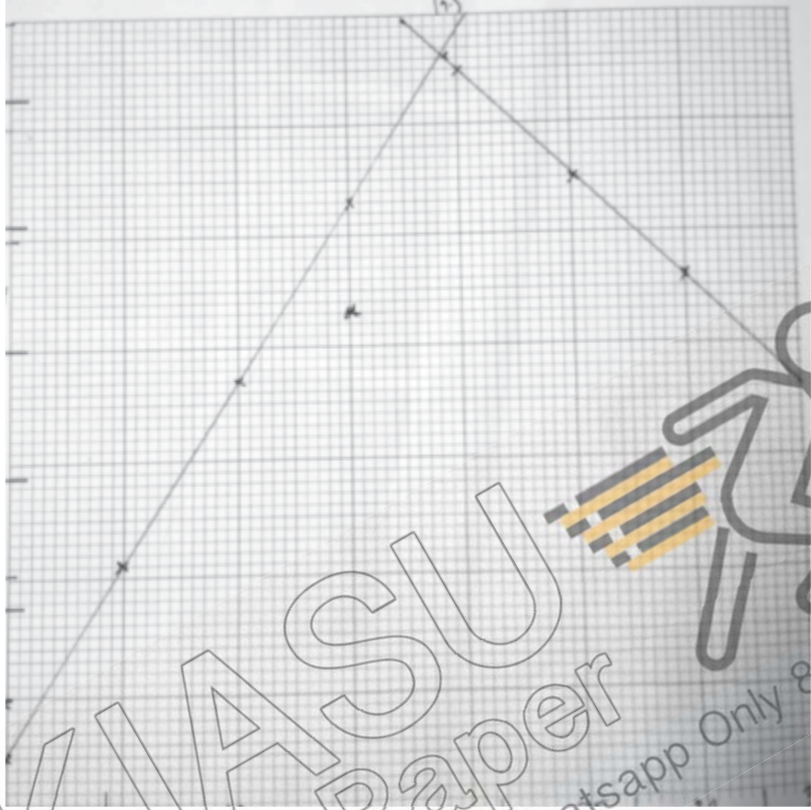
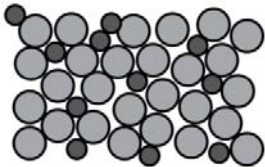
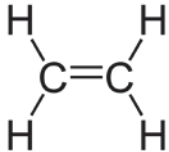
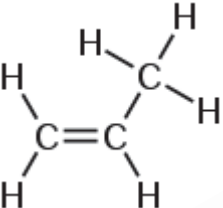


Qn No.	Section A [14 marks]	Marks per part Qn	Total marks per Qn
1	a	D	1m
	b	E	1m
	c	A and F	1m
	d	C and E	1m
2	a	$Al_2(SO_4)_3$	1m
	b	$M_r = 2(27) + 3(32 + 4[16])$ $= 54 + 3(96)$ $= 342$	ECF 1m
	c	$0.2052 \text{ kg} = 205.2 \text{ g}$ No. of moles = $205.2/342$ $= 0.6 \text{ mol}$	ECF 1m
	d	Aluminium sulfate is soluble in water and it will be filtered through the filter paper together with water.	1m
3	a	 <p>Legend x – electron of carbon o – electron of oxygen</p> <p>Minus 1 mark if wrong number of shared electrons. Minus 1 mark if did not differentiate electrons</p>	2m
	b	Sodium atom will transfer one valence electron to a negative ion to form sodium ion. (lose one valence electron)	1m
	c	Sodium chloride is an ionic compound. <u>Large amount of energy is required to overcome the strong electrostatic forces of attraction between the oppositely charge ions.</u> Carbon dioxide is a covalent compound. <u>Lesser energy is required to overcome the weak intermolecular forces of attraction.</u>	1m 1m 1m
4	a	Burette	1m
	b	Neutralisation	1m
	c	$HCl + NaOH \rightarrow NaCl + H_2O$	1m

Qn No.		Section B [16 marks]	Marks per part Qn	Total marks per Qn	
4	d	 <p>All points plotted accurately [1] Lines pass through the respective points [1]</p>	2m	8m	
	e	19.5cm ³	1m		
	f	Red. The remaining mixture is acidic as hydrochloric acid is in excess.	1m 1m		
5	a	i	Argon or water vapour	1m	
		ii	Town B. <u>Sulfur dioxide</u> which is produced by factories can be found in the air of town B.	1m 1m	
		iii	Test: Use a glowing splint. Observation. The splint rekindle/relight in the presence of oxygen	1m 1m	
5	b	i	Alloy	2m	8
		ii	The atoms in pure gold are orderly arranged and the layers can slide off easily resulting in the jewellery to break apart.	1m	

Qn No.		Section B [16 marks]	Marks per part Qn	Total marks per Qn
	b iii		1m	
6	a	Ethene : C_2H_4  propene : C_3H_6 	1m for 2 correct boxes 2m for 4 correct boxes	8
	b	Increasing melting point/boiling point/viscosity Decreasing flammability	1m	
	c	Test: Add bromine water/aqueous bromine with ethane: no colour change will be observed. with ethene: Reddish brown aqueous bromine will turn colourless	1m 1m 1m	
	d	$C_{14}H_{30} \rightarrow C_3H_6 + C_{11}H_{24}$ ECF for their molecular formula of propene from part a.	1m	
	e	High temperature with solid catalyst (aluminium oxide, silicon(IV)oxide or porcelain chips.	1m	