

## C2 – Mixtures Core Questions

1	What is the difference between a compound and a mixture in terms of their separation techniques?	Mixtures can be separated by physical methods whereas compounds cannot.
2	How can compounds be separated?	Through chemical reactions
3	What is a solvent?	A substance, normally a liquid, that dissolves another substance.
4	Give 2 examples of solvents	Water, nail varnish remover, ethanol
5	What is a solute?	A substance that can dissolve in a liquid.
6	Give 3 examples of solutes	Sugar, salt, coffee granules
7	What does "dissolve" mean?	When a solute mixes completely with a solvent.
8	What does "solubility" mean?	Maximum mass of solute that dissolves in a certain volume of solvent.
9	What does "soluble substance" mean?	A substance that will dissolve in a solvent
10	What three things affect solubility?	Temperature, type of solvent, type of solute
11	What does "insoluble substance" mean?	A substance that will not dissolve in any amount of solvent.
12	What is a solution?	Mixture formed when a solvent dissolves a solute
13	Give 3 examples of solutions	Tea, salt water, juice
14	What is filtration?	The process of separating an insoluble solid from a solution or liquid
15	What is a filter?	A device which solutions pass through and larger particles do not
16	What is a filtrate?	A liquid or solution which has passed through a filter
17	What is a residue?	The solid substance left in the filter paper at the end of the filtration process.
18	What 3 pieces of equipment are used to carry out filtration?	Funnel, filter paper, conical flask
19	What is meant by evaporation?	The process in which a liquid changes state and turns into a gas.
20	What is the process of distillation used for?	To separate a solute from a solvent.
21	What 2 processes are involved in distillation?	Condensation and evaporation
22	What is the condenser used for?	To cool down the vapour and turn it into liquid
23	What is meant by crystallisation?	The process of producing a solid from a solution.
24	How do you get smaller crystals?	Heat the solvent so it evaporates quickly
25	How do you get larger crystals?	Let the solvent evaporate slowly
26	What is left behind in the evaporating basin in the process of crystallisation?	Solid solute particles as a crystal
27	What is a saturated solution?	A saturated solution is one in which no more solute can dissolve
28	How can you tell if a solution is saturated?	Any more solute that is added will settle to the bottom of the container
29	What is chromatography used for?	Separating compounds.
30	Why does chromatography work?	Some compounds will dissolve better than others in water.
31	Why is the line on the chromatography paper drawn in pencil?	So it does not dissolve in the solvent and get drawn up the paper.
32	In chromatography, how do you know how many compounds the mixture you are separating is made up from?	Counting the number of dots above the position you originally put the mixture on