

3. This question is about chemistry general knowledge based on coloured compounds

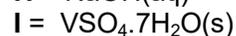
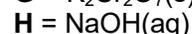
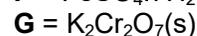
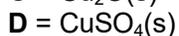
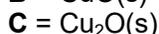
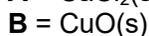
Chemists recognise many substances by their colour.

This question tests your knowledge about the colour of a range of chemicals that you will have come across as part of your studies of chemistry.



- (a) In the answer booklet, a number of colours are listed. For each colour, if one of the substances below is that colour, give its letter. If that colour cannot be made using a single substance, give the letters of two substances that will produce this colour when mixed. A substance may be used more than once.

Choose from



- (b) A student was provided with 7 unknown aqueous solutions. Each solution contained only one substance and all solutions were different.

The student mixed pairs of solutions in an attempt to identify each of the substances. The results from these tests are shown below. A blank cell shows where no observable results were obtained.

Analyse the results and assign the following substances as solutions **T-Z**.

barium chloride

dissolved chlorine gas
(i.e. chlorine water)

iron(II) sulfate

lead(II) nitrate

silver nitrate

sodium carbonate

sodium iodide

	T	U	V	W	X	Y	Z
T		Bright yellow precipitate formed	White precipitate formed	–	White precipitate formed	White precipitate formed	White precipitate formed
U	Bright yellow precipitate formed		–	Yellow precipitate formed	–	–	Brown solution
V	White precipitate formed	–		White precipitate formed (darkened in daylight)	White precipitate formed	White precipitate formed	–
W	–	Yellow precipitate formed	White precipitate formed (darkened in daylight)		Off-white precipitate formed	White precipitate formed	White precipitate formed (darkened in daylight)
X	White precipitate formed	–	White precipitate formed	Off-white precipitate formed		Dirty green precipitate formed (turned brown on standing)	–
Y	White precipitate formed	–	White precipitate formed	White precipitate formed	Dirty green precipitate formed (turned brown on standing)		Pale yellow solution
Z	White precipitate formed	Brown solution	–	White precipitate formed (darkened in daylight)	–	Pale yellow solution	