Question	Marking Guidance	Mark	Comments
6(a)	$\Delta E = h\nu$	1	Allow = h*f*
	$\nu = \Delta E / h = 2.84 \times 10^{-19} / 6.63 \times 10^{-34} = 4.28 \times 10^{14}\ s^{-1}$ / Hz	1	Allow $4.3 \times 10^{14}\ s^{-1}$ / Hz Answer must be in the range: $4.28 - 4.30 \times 10^{14}$
6(b)	(One colour of) light is absorbed (to excite the electron)	1	If light emitted, CE = 0
	The remaining colour / frequency / wavelength / energy is transmitted (through the solution)	1	Allow light reflected is the colour that we see.
6(c)	Bigger	1	
	Blue light would be absorbed ***OR*** light that has greater energy than red light would be absorbed ***OR*** higher frequency (of light absorbed / blue light) leads to higher ΔE	1	Can only score M2 if M1 is correct.

6(d)	Any **three** from: • (Identity of the) metal • Charge (on the metal) / oxidation state / charge on complex • (Identity of the) ligands • Co-ordination number / number of ligands • Shape	3 max	