

Question	Marking Guidance	Mark	Comments
6(a)	$1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10}$	1	allow [He] $2s^2$. or [Ne] $3s^2$.or [Ar] $3d^{10}$
	d sub-shell / shell / orbitals / sub-level full (or not partially full)	1	can only score M2 if d^{10} in M1 correct allow 'full d orbital' if d^{10} in M1 do not allow d block
6(b)	atom or ion or transition metal bonded to / surrounded by one or more ligands	1	Allow Lewis base instead of ligand
	by co-ordinate / dative (covalent) bonds / donation of an electron pair	1	can only score M2 if M1 correct
6(c)	H_2 / hydrogen	1	do not allow H
	no lone / spare / non-bonded pair of electrons	1	only score M2 if M1 correct or give 'H' in M1
6(d)(i)	+2 or 2+ or Pd^{2+} or II or +II or II+ or two or two plus	1	
6(d)(ii)	tetrahedral	1	these shapes can be in any order
	square planar	1	allow phonetic spelling e.g. tetrahydral