Answer		Additional guidance	Marks
D			1
В			1
D			1
• order: GZ > DX > EY	(1)		3
both EY and DX)	(1)		
construction of balanced cycle	(1)	Example calculation	2
 substitution and evaluation of 2nd IE 	(1)	$-2258 = -590 - 2^{nd} IE + 2 (349) - 178 - 2 (122) - 796$	
		hence 2 ^{md} IE = (+) 1148 (kJ mol ⁻¹) correct answer, no working scores 2 marks	
	D B D • order: GZ > DX > EY Justification: • the ions in GZ have higher charges (than those in both EY and DX) • the ions in DX are smaller than those in EY • construction of balanced cycle	D B D • order: GZ > DX > EY (1) Justification: • the ions in GZ have higher charges (than those in both EY and DX) • the ions in DX are smaller than those in EY • construction of balanced cycle	DImage: DBImage: D D Image: D \bullet order: $GZ > DX > EY$ (1)Justification: • the ions in GZ have higher charges (than those in both EY and DX)(1) \bullet the ions in DX are smaller than those in EY(1) \bullet construction of balanced cycle(1) \bullet substitution and evaluation of 2^{nd} IE(1) $-2258 = -590 - 2^{nd}$ IE + 2 (349) - 178 - 2 (122) - 796 hence 2^{nd} IE = (+) 1148 (kJ mol ⁻¹)

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