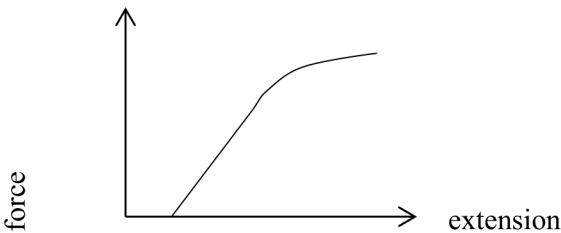| Question Number	Answer		Mark
16(a)(i)	• Point K is the limit of proportionality **Or** beyond K, the force is no longer proportional to the extension **Or** Hooke's Law no longer obeyed **Or** before K the force is proportional to the extension **Or** Hooke's Law obeyed	(1)	1
16(a)(ii)	• Beyond point L the spring will behave plastically	(1)	
	• Beyond L, the spring will no longer return to its original length (once the deforming force is removed)/spring will be permanently deformed **Or** below L, the spring will return to its original length (once the deforming force is removed)	(1)	2
16(a)(iii)	• The spring constant/stiffness (not Young modulus) is smaller or has changed (do not allow greater stiffness)	(1)	1
16(b)	• Same shape graph but starting from an extension > 0	(1)	1
16(c)	• Same force acts through both springs	(1)	
	• Both springs have the same extension	(1)	
	• In this combination the (total) extension will be doubled	(1)	
	Or Force required for same (total) extension is halved		4
	• Reference to $F = k\Delta x$ e.g. k is proportional to $1/\Delta x$ so k is halved	(1)	
	Total for question 16		9