Question Number	Scheme	Marks
1 (a)	When the data is ordinal e.g. Judges' ranks	B1
	When a non-linear relationship might be expected	B1
		(2)
(b)	$H_0 : \rho = 0$, $H_1 : \rho \neq 0$	B1
	Critical value $r_s = -0.6485$ or CR: $r_s \leqslant -0.6485$ $(\text{and } r_s \geqslant 0.6485)$	B1
	Reject H_0 or significant or lies in the critical region	M1
	The Spearman's rank correlation coefficient shows there is sufficient evidence of a correlation [between the length and maximum diameter of the melons]	A1
		(4)
(c)	$H_0 : \rho = 0$, $H_1 : \rho < 0$	B1
	Critical value $r = -0.5494$ or CR: $r \leqslant -0.5494$	B1
	The product moment correlation coefficient shows there is insufficient evidence of a **negative** correlation [between the length and maximum diameter of the melons]	B1
		(3)

	Notes	**Total 9**
(a)	**B1**	For one correct condition
	B1	For a second correct condition. Condone not underlying normal
(b)	**B1**	For both hypotheses correct. Must be in terms of ρ. Must be attached to H_0 and H_1
	B1	For critical value of –0.6485 (Allow –0.5636 if a one tailed test is stated for H_1) Condone 0.6485 if compared with 0.673
	M1	A correct statement – no context needed but do not allow contradicting non contextual comments. ft their CV provided the CV is negative (May be implied by a correct conclusion) Condone a positive CV if a comparison with 0.673 seen
	A1	For a correct conclusion which is rejecting H_0 Allow negative correlation This mark is independent of the hypotheses
(c)	**B1**	For both hypotheses correct. Must be in terms of ρ. Must be attached to H_0 and H_1
	B1	For critical value of –0.5494 (Allow –0.6319 if a two tailed test is stated for H_1) Condone 0.5494 if compared with 0.525
	B1	For a correct conclusion which is not rejecting H_0