Question			Answer	Marks	Part Marks and Guidance	
1	(a)		5 correct points plotted	2	**B1** for 2 or more points correctly plotted	Within one small square
	(b)		Weak Positive	1 1	Or **B1** for 'no correlation' Condone a description of positive if it covers both 'ends'	If 'no correlation' ignore any statements regarding strength eg "As the hours of sunshine rise then so do the temperatures and as they fall the temperatures fall"
	(c)		Yes as there is a correlation or No with sensible reason relating to weak	**1**	Must be consistent with *their* answer in (b)	eg No as the correlation is weak

2	**(a)**		Ruled line of best fit	1	Within limits of overlay	
	(b)		11 or 12 only	1		
	(c)		Positive	1		Ignore 'strong' etc

3			Strong negative No correlation	2 1	**B1** for negative correlation	Condone fewer than 10 crosses drawn providing correlation clear

4	**(a)**		2 points plotted ± ½ vertical unit	2	**B1** for 1 point plotted ± ½ vertical unit If > 2 points plotted –1 for each extra. Ignore points from (c) ie on line is ok	Overlay available
	(b)		Ruled line drawn	1	From age 10 to 20	Within tramlines
	(c)	**(i)**	4.7-5.1 5.8-6.3	1 1		
		(ii)	Marco Data more strongly correlated for younger ages	M1 A1	Accept *their* value for Marco	Condone other relevant arguments. Mark best part even if contradictory. **A0** for 'More accurate', 'More points', 'fits the pattern'

5	**(a)**	5 points correct	**2**	**B1** for at least 2 points correct	'Touching' overlay Do not zoom from 'fit width' Ignore any extra points
	(b)	Ruled line	**1**	Within overlay for 30<music<70	
	(c)	Positive	**1**	Ignore strong, weak etc	
	(d)	Point with greatest vertical distance above $F = M$ ringed	**1**		

6		Both Lizzie and Parand are correct. Explanation of no correlation as first decreasing then increasing with age **and** that that constitutes a relationship. Correct language used.	**4-3**	For lower mark – minor errors in spelling, punctuation or grammar or small use of poor mathematical language. Look out for more sophisticated answers that say Lizzie is wrong as there is a non-linear correlation – this can earn full marks.	
		Either Lizzie or Parand is correct, the other ignored or incorrect. Explanation of why that one person is correct.	**2-1**	For lower mark – explanation made with poor spelling, punctuation and grammar.	
		Neither identified as correct or no explanation.	**0**		

7	**(a)**		Negative Weak No oe	B1 B1 1	'Strong', does not score (Indep) 'Scattered' or 'random' without 'no' does not score	Allow 'moderate', 'medium' 'quite/fairly strong' 'low', 'poor' etc Strong / weak implies a correlation so does not score
	(b)	**(i)**	4 points correct	2	**B1** for 2 points correct Or **B1** for 2 or more columns correct height	± half a small square. Use overlay as a guide. If columns then mark consistently left, middle or right of top
		(ii)	The points are nowhere near a straight line oe	1	Accept 'No correlation', 'points form a curve', there is no linear correlation, the plotted points do not form a line	Random', 'scattered' does not imply no correlation
		(iii)	[Getting older means] reaction time decreases [remains stable] then starts to increase.	1	Condone 'slow' then 'fast' then 'slow' soi If describing just the ends or just the middle, need to see comparatives such as slower or fastest etc.	Do not accept a list of ages and reaction times alone. Do not accept "It starts high then falls and rises again" or converse (as, in either case, "it" is undefined)

8	**(a)**		3 correct points	2	**B1** for 1 correct	Correct intention Ignore extras
	(b)	**(i)**	Positive	1		Ignore strong/weak Contradictory statements score **0**
		(ii)	Because of the outlier or anomaly or E Too few crosses	1	Must state or imply only 1 outlier or anomaly; may be a description Ignore further comment	Unless their plots form outliers "Outlier**s**" implies more than 1 eg to be reliable
	(c)		C	1		
	(d)		E	1		

9	(a)	(i)	No correlation / relation(ship) oe	1		Allow 'None', 'No pattern' Not 'Random', 'No', 'Neutral'
		(ii)	'No' + reasonable comment about the lack of correlation	1	Yes with or without reason scores **0**	Comment must describe zero correlation or give an example where increased height does not give decreased temp. Mark best bit

	(b)	(i)	Labelled scatter graph of latitude against average temp	4	**B2** for both axes scaled and labelled Or **B1** for one axis scaled and labelled or for both axes either scaled or labelled AND **B2** for ≥ 9 points correctly plotted Or **B1** ≥ 4 points correctly plotted If **0** scored then **SC1** for attempt at graph of latitude against height	Overlay available Scale must fit on grid and be linear ie not labelling latitude as 0, 4, 8, 15 etc ie 2, 1 or 0 wrong points Mark points within range of *linear* scale covering most points Tolerance ±1 whole square Ignore any line of best fit or other trend line
		(ii)	'Yes', 'No', 'Partially', 'Maybe' etc and convincing explanation relating to whole data set	2	**B1** for 'Yes' or 'No' and partial explanation Mark best part for **B1**	**Complete** Temp between latitude 0° and 15° are high, then they drop and beyond latitude 30° to 35° they are cooler. Apart from Khartoum, temperatures from 0° to 30° are about the same, then there is a negative correlation There is a (weak) negative correlation meaning that countries near the equator are warmer. Two points are outliers Yes only Khartoum is wrong Yes but first 3 are wrong **Partial** Countries near the equator are warmer or Countries far from the equator are cooler or No – negative correlation Yes – negative correlation

10			Weak negative No/zero (correlation) Strong positive	**1** **1** **1**	oe eg No pattern, random Or **SC2** for negative, no/zero, positive Or **SC1** for negative and positive	Ignore 'fairly' weak etc and other irrelevant comments. Mark to candidates advantage

11	**(a)**		4 correct points	2	**B1** for 1 correct	Overlay available Accuracy: vertical - to within one division; horizontal - intention is on the line Condone any 'joining'
	(b)		No correlation	1		

12	(a)		3 points correctly plotted	2	**B1** for 1 point correctly plotted	Set “fit to height” Centre of the points should lie within or just touching the circles on the overlay – if in doubt give bod
	(b)		Straight line of best fit drawn	1		Line to cross the red and green lines, can be on ends; red anchored on (2, 20 000)
	(c)		Positive	1	Ignore other adjectives eg weak	Not a description of higher engine size, higher price
	(d)		Any value in range 15 500 – 21 000	1	Condone a 3dp decimal eg 18.000	Not 18.0[0]
	(e)		Furthest point above *their* line of best fit	1FT	Correct(2, 29945) or FT *their* line of best fit	