

Question 2 (Total 11 marks)

Part	Working or answer an examiner might expect to see	Mark	Notes
(a)	$IQR = 26.6 - 19.4 = 7.2$	B1	This mark is given for finding the interquartile range
	$19.4 - (1.5 \times 7.2) = 8.6$ $26.6 + (1.5 \times 7.2) = 37.4$	M1	This mark is given for a method find the values for the whiskers of the boxplot
	Plotting 7.6°C as an outlier. With whiskers plotted at 31.6 °C as the upper and 8.6 °C (or 9.5°C) as the lower	A1	This mark is given for plotting the correct outlier 7.6 °C
		A1	This mark for plotting both whiskers correct
(b)	October (since it is the month with the coldest temperatures between May and October in Beijing)	B1	This mark is given for a correct suggestion with a supporting reason.
(c)	$\sigma = \sqrt{\frac{S_{xx}}{n}} = \sqrt{\frac{4877.585}{166}} = \sqrt{29.38} = 5.42$	B1	This mark is given for showing the calculation for the standard deviation to three significant figures
(d)	$z = (\pm) 1.2816$	B1	This mark is given for identifying the z-value for the 10th and 90th percentiles (from tables or calculator)
	$2 \times z \times 5.42$	M1	This mark is given for a method to find the interpercentile range between the 10th and 90th value
	$= 13.9$	A1	This mark is given for finding a correct interpercentile range between the 10th and 90th value
(e)	Daily wind speed (Beaufort) since it is qualitative data	B1	This mark si given for stating a correct variable with a supporting reason
	Rainfall (since it is not symmetric)	B1	This mark is given for stating a correct variable with a supporting reason