Frequency Trees Past Paper Questions (MS)

Q1.

Question	Answer	Mark	Mark scheme	Additional guidance
	4 22 45 18 7 23 16	C1	for correctly placing at least one piece of data (22 or 16) **OR** for finding at least one unknown piece of data (4, 18, 7 or 23)	Unknown figures may be seen in working and need not be on the diagram
		C1	for correctly placing at least one piece of data (22 or 16) **and** for finding at least one unknown piece of data (4, 18, 7 or 23)	Award of this mark implies the first C1
		C1	for a complete correct tree. **SC C2** if all 6 figures are shown as the numerator of fractions in the correct places	

Q2.

Question	Working	Answer	Mark	Notes
(a)		Complete tree 60, **39, 21, 27,** **12, 15, 6**	3	C1 for starting to interpret information, e.g. One correct frequency from 21 or 27 C1 for at least one correct additional value C1 for communicating all information correctly
(b)		$\frac{12}{39}$	2	M1 ft for $\frac{a}{39}$ with $a < 39$ or $\frac{12}{b}$ with $b > 12$ A1 ft from (a) oe

Q3.

Question	Working	Answer	Mark	Notes
(a)		23, 177	C3	Completes all information correctly.
		10, 13, 85, 92	(C2	3 or 4 correct frequencies or all correct probabilities)
			(C1	2 correct frequencies)
(b)		$\frac{13}{23}$	M1	ft oe for $\frac{a}{23}$, $a < 23$ or $\frac{13}{b}$, $b > 13$
			A1	ft oe from (a)

Q4.

Paper 1MA1: 1F			
Question	**Working**	**Answer**	**Notes**
(a)		42, 58 39, 3, 53, 5	C1 starts to interpret information eg. one correct frequency
			C1 continue to interpret information
			C1 communicates all information correctly
(b)		$\dfrac{5}{58}$	M1 ft for $\dfrac{a}{58}$ with $a < 58$ or $\dfrac{5}{b}$ with $b > 5$
			A1 ft from (a)

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	32, 48, 24, 8, 37, 11	C1	starts to interpret information, eg 48 or 8 in correct place	
		C1	for 80 − 48 (= 32) and "32" − 8 (= 24)	
		C1	completes frequency tree correctly SC: award C2 if all correct frequencies are shown as fractions of 80.	
(b)	$\dfrac{37}{61}$	M1	ft for $\dfrac{a}{\text{"61"}}$ with $a < $ "61" or $\dfrac{\text{"37"}}{b}$ with $b >$ "37"	Incorrect notation with "37" and "61" can earn the method mark but not the accuracy mark.
		A1	ft from diagram in (a)	Accept any equivalent fraction, decimal form 0.60(65...) or 0.61 or percentage form 60(.65...)% or 60% or 61%

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
(a)	16 45 29 75 14 61	C1	starts to interpret information eg 75 or 29 in the correct place	May be seen as numerators of fractions for the first 2 marks.
		C1	for 120 − 75 (= 45) and "45" − 29 (= 16)	Could be seen in working or on the diagram
		C1	Complete and correct frequency tree	
(b)	$\dfrac{29}{120}$	B1	for $\dfrac{29}{120}$ or ft "29" from part (a)	Accept any equivalent fraction, decimal form 0.24(166...) or percentage form 24(.166..) Ignore subsequent incorrect attempts to write the correct answer in a different form.