Question Number	Scheme	Marks
3 (a)	$1-p$, $\frac{7}{8}$ and $\frac{9}{10}$ in the correct place on tree diagram	B1
		(1)
(b)	$\frac{1}{8}p+\frac{1}{10}(1-p)=0.11$	M1 A1ft
	$p=\frac{2}{5}$	A1
		(3)
(c)	$'\frac{2}{5}'\times\frac{1}{8}=\frac{1}{20}$	M1 A1ft
		(2)
(d)	$\mathrm{P}(\mathrm{Y12}\mid R)=\frac{'\frac{2}{5}'\times\frac{7}{8}}{1-0.11}$ or $\mathrm{P}(\mathrm{Y12}\mid R)=\frac{'\frac{2}{5}'\times\frac{7}{8}}{'\frac{2}{5}'\times\frac{7}{8}+'\frac{3}{5}'\times\frac{9}{10}}$	M1
	$=\frac{35}{89}$	A1
		(2)

	Notes		Total 8
(a)	**B1**	For a fully correct tree diagram with all 3 correct labels. Allow if $1-p$ is seen and crossed out/replaced with a numerical probability.	
(b)	**M1**	For $\frac{1}{8}p$ or $\frac{1}{10}'(1-p)'$ seen in an equation for p	
	A1ft	For a fully correct equation in p or correct ft equation based on their tree diagram	
	A1	oe correct answer scores 3 out of 3	
(c)	**M1**	For $p\times\frac{1}{8}$ ft their p, provided p is a probability	
	A1ft	For a correct answer ft their p, provided p is a probability. Correct answer scores 2 out of 2	
(d)	**M1**	For a correct ratio of probabilities. Can ft their p, provided p is a probability	
	A1	For $\frac{35}{89}$ (Allow awrt 0.393)	