Q	Marking instructions	AO	Marks	Typical solution
18(a)(i)	Obtains 0.39	1.1b	B1	0.39
	Subtotal		**1**	

Q	Marking instructions	AO	Marks	Typical solution
18(a)(ii)	States or calculates $1 - \text{P}(G \cap H)$ or states $0.07 + 0.18 + 0.54$ **PI** by correct answer	1.1a	M1	$1 - 0.21 = 0.79$
	Obtains 0.79	1.1b	A1	
	Subtotal		**2**	

Q	Marking instructions	AO	Marks	Typical solution
18(a)(iii)	States $\text{P}(H \mid G') = \dfrac{\text{P}(H \cap G')}{\text{P}(G')}$ Condone missing $\text{P}(H \mid G')$ or states $\text{P}(H \cap G') = 0.07$ or $\dfrac{0.07}{k}$ seen or states $0.07 + 0.54$ or 0.61 or $\dfrac{k}{0.07 + 0.54}$ seen **PI** by correct answer	1.1a	M1	$\text{P}(H \mid G') = \dfrac{\text{P}(H \cap G')}{\text{P}(G')}$ $= \dfrac{0.07}{0.61}$ $= \dfrac{7}{61}$
	Obtains $\dfrac{7}{61}$ or **AWFW** [0.11, 0.115]	1.1b	A1	
	Subtotal		**2**	

Q	Marking instructions	AO	Marks	Typical solution
18(b)	States their P(G) from part **18(a)(i)** $\times$ 0.28 or compares their P(G) from part **18(a)(i)** with 0.75 or compares their P($H \mid G$) with 0.28 or compares their P($H \mid G'$) from part **18(a)(iii)** with 0.28 or any other valid comparison with one correct probability to at least 2 sf	3.1b	M1	$P(G) \times P(H) = 0.39 \times 0.28$ $= 0.1092$ $P(G \cap H) = 0.21$ $P(G \cap H) \neq P(G) \times P(H)$ Hence G and H are not independent
	Completes a reasoned argument and concludes that G and H are **not independent**	2.4	R1	
	Subtotal		**2**	

	Question 18 Total		**7**	