Question	Scheme	Marks	AOs
1(a)	J and L	B1	1.2
		(1)	
(b)	$0.27 + v + 0.2 + u + 0.18 = 1$ $u + v = 0.35$ *	B1*	1.1b
		(1)	
(c)(i)	Use of independence $\mathrm{P}(J) \times \mathrm{P}(K) = \mathrm{P}(J \text{ and } K)$ and substituting to get an equation in terms of u and v to reach $(0.27 + u)(u + v + 0.2) = u$	M1	2.1
	Substitution of $u + v = 0.35$ to form an equation in u only $0.55(u + 0.27) = u$ o.e.	A1	1.1b
		(2)	
(c)(ii)	Solving their equation from (i) to find a value of u $0.55(u + 0.27) = u$ $0.45u = 0.1485$ $u = \ldots$	M1	1.1b
	$u = 0.33$ $v = 0.02$	A1	1.1b
		(2)	
			(6 marks)

Notes:

(a)	**B1:**	Correctly choosing J and L only
(b)	**B1*:**	Writing or using sum of probabilities = 1 and simplifying to reach $u + v = 0.35$
(c)(i)	**M1:**	Use of independence relationship to obtain an equation in u and v
	A1:	Substituting into independence equation to reach an equation in u only
(c)(ii)	**M1:**	Solving their equation to obtain a value for u
	A1:	Correct values of u and v