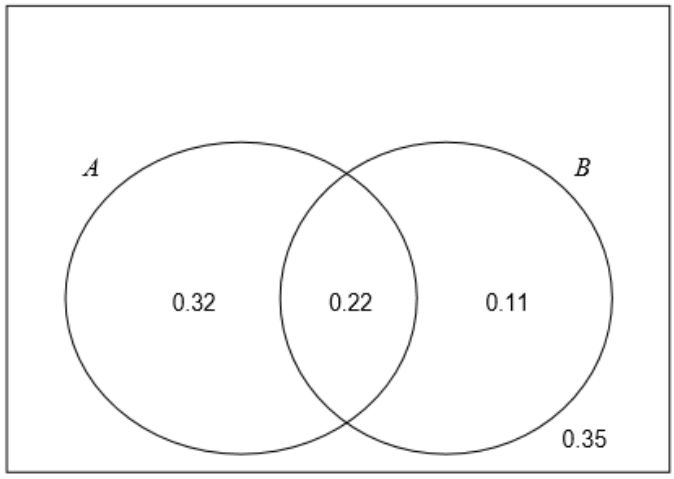
Mutually Exclusive & Independent Events- Edexcel Past Exam Questions MARK SCHEME

Question 1: Jan 06 Q6

(a)		Venn Diagram 0.32,0.11 & A,B 0.22,0.35 & box	M1 A1 A1 (3)
(b)	$P(A) = 0.32 + 0.22 = 0.54; P(B) = 0.33$		M1A1ft;A1ft (3)
(c)	For independence $P(A \cap B) = P(A)P(B)$ For these data $0.22 \neq 0.54 \times 0.33 = 0.1782$ $\therefore$ NOT independent		M1A1ft A1ft (3)

Question 2: June 09 Q7

Question Number	Scheme		Marks
(a) (i)	$P(A \cup B) = a + b$	cao	B1
(ii)	$P(A \cup B) = a + b - ab$	or equivalent	B1 (2)
(b)	$P(R \cup Q) = 0.15 + 0.35$ $= 0.5$	0.5	B1 (1)

Question 3: June 11 Q6

Question Number	Scheme	Marks
(a)	$P(J \cup K) = 1 - 0.7$ or $0.1 + 0.15 + 0.05 =$ $\underline{0.3}$	B1 (1)
(b)	$P(K) = 0.05 + 0.15$ or "0.3" $- 0.25 + 0.15$ or "0.3" $= 0.25 + P(K) - 0.15$	M1
	May be seen on Venn diagram $= \underline{0.2}$	A1 (2)