① $P(+g, +a, +b, +s)$

$= P(+g) \cdot P(+a|+g) \cdot P(+b) \cdot P(+s|+b,+a)$

$= 0.1 \times 1.0 \times 0.4 \times 1.0$

$= \underline{\underline{0.04}}$

② $P(+a)$

$= \left[P(+a|+g) \cdot P(+g) \right] + \left[P(+a|-g) \cdot P(-g) \right]$

$= \left[1.0 \times 0.1 \right] + \left[0.1 \times 0.9 \right]$

$= \underline{\underline{0.19}}$

③ $P(+a|+b)$

$= P(+a) \qquad \therefore A \perp\!\!\!\perp B.$

$= \underline{\underline{0.19}}$

④ $P(+a|+s, +b)$

$= \dfrac{P(+a, +b, +s)}{P(+a, +b, +s) + P(-a, +b, +s)}$

$= \dfrac{P(+a) \cdot P(+b) \cdot P(+s|-a, +b)}{\left[P(+a) \cdot P(+b) \cdot P(+s|+a, +b) \right] + \left[P(-a) \cdot P(+b) \cdot P(+s|-a, +b) \right]}$

$= \dfrac{0.19 \times 0.4 \times 1.0}{\left[0.19 \times 0.4 \times 1.0 \right] + \left[(1-0.19) \times 0.4 \times 0.8 \right]} \qquad = \dfrac{0.076}{0.076 + (0.81 \times 0.32)}$

$= \dfrac{0.076}{0.076 + 0.2592} = \dfrac{0.076}{0.3352} \qquad = \underline{\underline{0.22673031}}$

(5) $P(+g | +a) = \dfrac{P(+g) \cdot P(+a|+g)}{\left[P(+g) \cdot P(+a|+g)\right] + \left[P(-g) \cdot P(+a|-g)\right]}$

$= \dfrac{0.1 \times 1.0}{\left[0.1 \times 1.0\right] + \left[0.9 \times 0.1\right]}$

$= \dfrac{0.1}{0.1 + 0.09} = \dfrac{0.1}{0.19}$

$= \underline{0.52631579}$

(6) $P(+g | +b) =$

$= P(+g)$ $\therefore, G \perp\!\!\!\perp B.$

$= \underline{0.1}$