(A) $P(U) = P(U|R) * P(R) + P(U|\bar{R}) * P(\bar{R})$

$P(R) = P(R|S,A) + P(S \cap A) + P(R|\bar{S}A) \times P(\bar{S} \cap A)$

$P(R|S\bar{A}) * P(S \cap \bar{A}) + P(R|\bar{S}\bar{A}) \times P(\bar{S} \cap \bar{A})$

$= 0.95 \times 0.001 \times 0.002 + 0.29 \times 0.999 \times$

$0.02 + 0.94 * 0.001 \times 0.998 +$

$0.001 * 0.999 \times 0.998$

$= 0.0000019 + 0.000579 + 0.0001$

$0.002159 = \boxed{0.9974}$

(B) $P(R=1|A=0) = P(R=1|S=0, A=0) \times P|S=0)$

$+ P(R=1|S=1, A=0) \times P|S=1$

$0.001 \times 0.999 + 0.94 \times 0.001$

$\boxed{= 0.001939}$

(C) $P(S=1|R=1) = P(R=1|S=1) \times P(S=1)$

$P(R=1|S=1, A=0) \times P(A=0) + P(R=1|S=1, A=1) \times$

$P(A=1)$

$0.94 \times 0.998 + 0.95 \times 0.002$

$= 0.93812 + 0.0019$

$= \dfrac{0.96002 \times 0.001}{0.0025}$

$\boxed{= 0.376}$