

27. Solution: D

Use Baye's Theorem with A = the event of an accident in one of the years 1997, 1998 or 1999.

$$\begin{aligned} P[1997|A] &= \frac{P[A|1997]P[1997]}{P[A|1997][P[1997]] + P[A|1998]P[1998] + P[A|1999]P[1999]} \\ &= \frac{(0.05)(0.16)}{(0.05)(0.16) + (0.02)(0.18) + (0.03)(0.20)} = 0.45 . \end{aligned}$$