

### Question #65

Answer: E

$$\begin{aligned} \overset{\circ}{e}_{25:\overline{25}|} &= \int_0^{15} {}_t p_{25} dt + {}_{15} p_{25} \int_0^{10} {}_t p_{40} dt \\ &= \int_0^{15} e^{-.04t} dt + \left( e^{-\int_0^{15} .04 ds} \right) \int_0^{10} e^{-.05t} dt \\ &= \frac{1}{.04} (1 - e^{-.60}) + e^{-.60} \left[ \frac{1}{.05} (1 - e^{-.50}) \right] \\ &= 11.2797 + 4.3187 \\ &= 15.60 \end{aligned}$$