

Question #152

Answer: A

For death occurring in year 2

$$EPV = \frac{0.3 \times 1000}{1.05} = 285.71$$

For death occurring in year 3, two cases:

(1) State 2 → State 1 → State 4:	$(0.2 \times 0.1) = 0.02$
(2) State 2 → State 2 → State 4:	$(0.5 \times 0.3) = \underline{0.15}$
Total	0.17

$$EPV = \frac{0.17 \times 1000}{1.05^2} = 154.20$$

$$\text{Total. EPV} = 285.71 + 154.20 = 439.91$$