

215. For a whole life insurance of 1 on (x) with benefits payable at the moment of death, you are given:

(i) δ_t , the force of interest at time t is $\delta_t = \begin{cases} 0.02, & t < 12 \\ 0.03, & t \geq 12 \end{cases}$

(ii) $\mu_{x+t} = \begin{cases} 0.04, & t < 5 \\ 0.05, & t \geq 5 \end{cases}$

Calculate the actuarial present value of this insurance.

(A) 0.59

(B) 0.61

(C) 0.64

(D) 0.66

(E) 0.68