

2. For a whole life insurance of 1000 on (x) with benefits payable at the moment of death:

(i) The force of interest at time t , $\delta_t = \begin{cases} 0.04, & 0 < t \leq 10 \\ 0.05, & 10 < t \end{cases}$

(ii) $\mu_{x+t} = \begin{cases} 0.06, & 0 < t \leq 10 \\ 0.07, & 10 < t \end{cases}$

Calculate the single benefit premium for this insurance.

(A) 379

(B) 411

(C) 444

(D) 519

(E) 594