

**261.** You are given:

- (i)  $Z$  is the present value random variable for an insurance on the lives of  $(x)$  and  $(y)$ , where

$$Z = \begin{cases} v^{T_y}, & T_x \leq T_y \\ 0, & T_x > T_y \end{cases}$$

- (ii)  $(x)$  is subject to a constant force of mortality, 0.07.  
(iii)  $(y)$  is subject to a constant force of mortality, 0.09  
(iv)  $(x)$  and  $(y)$  are independent lives.  
(v)  $\delta = 0.06$

Calculate  $E[Z]$ .

- (A) 0.191  
(B) 0.318  
(C) 0.409  
(D) 0.600  
(E) 0.727