

**163.** You are given:

(i)  $T_x$  and  $T_y$  are not independent.

(ii)  $q_{x+k} = q_{y+k} = 0.05$ ,  $k = 0, 1, 2, \dots$

(iii)  ${}_k p_{xy} = 1.02 {}_k p_x {}_k p_y$ ,  $k = 1, 2, 3, \dots$

Into which of the following ranges does  $e_{\overline{x:y}}$ , the curtate expectation of life of the last survivor status, fall?

(A)  $e_{\overline{x:y}} \leq 25.7$

(B)  $25.7 < e_{\overline{x:y}} \leq 26.7$

(C)  $26.7 < e_{\overline{x:y}} \leq 27.7$

(D)  $27.7 < e_{\overline{x:y}} \leq 28.7$

(E)  $28.7 < e_{\overline{x:y}}$