

**225.** You are given:

- (i) The future lifetimes of (40) and (50) are independent.
- (ii) The survival function for (40) is based on a constant force of mortality,  $\mu = 0.05$ .
- (iii) The survival function for (50) follows  $l_x = 100(110 - x)$ ,  $0 \leq x \leq 110$ .

Calculate the probability that (50) dies within 10 years and dies before (40).

- (A) 10%
- (B) 13%
- (C) 16%
- (D) 19%
- (E) 25%