

**269-273.** Use the following information for questions 269-273. You are given:

- (i) (30) and (50) have independent future lifetimes, each subject to a constant force of mortality equal to 0.05.
- (ii)  $\delta = 0.03$

**269.** Calculate  ${}_{10}q_{\overline{30:50}}$ .

- (A) 0.155
- (B) 0.368
- (C) 0.424
- (D) 0.632
- (E) 0.845

**270.** Calculate  $\ddot{e}_{\overline{30:50}}$ .

- (A) 10
- (B) 20
- (C) 30
- (D) 40
- (E) 50

**271.** Calculate  $\bar{A}_{30:50}^1$ .

- (A) 0.23
- (B) 0.38
- (C) 0.51
- (D) 0.64
- (E) 0.77

**272.** Calculate  $Var[T_{30:50}]$ .

- (A) 50
- (B) 100
- (C) 150
- (D) 200
- (E) 400

**273.** Calculate  $Cov[T_{30:50}, T_{\overline{30:50}}]$ .

- (A) 10
- (B) 25
- (C) 50
- (D) 100
- (E) 200