

**79.** For a group of individuals all age  $x$ , you are given:

- (i) 30% are smokers and 70% are non-smokers.
- (ii) The constant force of mortality for smokers is 0.06 at all ages.
- (iii) The constant force of mortality for non-smokers is 0.03 at all ages.
- (iv)  $\delta = 0.08$

Calculate  $\text{Var}\left(\bar{a}_{\overline{T_x}|}\right)$  for an individual chosen at random from this group.

- (A) 13.0
- (B) 13.3
- (C) 13.8
- (D) 14.1
- (E) 14.6