

**70.** For a special fully discrete 3-year term insurance on (55), whose mortality follows a double decrement model:

(i) Decrement 1 is accidental death; decrement 2 is all other causes of death.

(ii)

$x$	$q_x^{(1)}$	$q_x^{(2)}$
55	0.002	0.020
56	0.005	0.040
57	0.008	0.060

(iii)  $i = 0.06$

(iv) The death benefit is 2000 for accidental deaths and 1000 for deaths from all other causes.

(v) The level annual gross premium is 50.

(vi)  ${}_1L$  is the prospective loss random variable at time 1, based on the gross premium.

(vii)  $K_{55}$  is the curtate future lifetime of (55).

Calculate  $E[{}_1L | K_{55} \geq 1]$ .

(A) 5

(B) 9

(C) 13

(D) 17

(E) 20