58. XYZ Paper Mill purchases a 5-year special insurance paying a benefit in the event its machine breaks down. If the cause is “minor” (1), only a repair is needed. If the cause is “major” (2), the machine must be replaced.

Given:

(i) The benefit for cause (1) is 2000 payable at the moment of breakdown.

(ii) The benefit for cause (2) is 500,000 payable at the moment of breakdown.

(iii) Once a benefit is paid, the insurance is terminated.

(iv) $\mu_t^{(1)} = 0.100$ and $\mu_t^{(2)} = 0.004$, for $t > 0$

(v) $\delta = 0.04$

Calculate the expected present value of this insurance.

(A) 7840

(B) 7880

(C) 7920

(D) 7960

(E) 8000