

62. A large machine in the ABC Paper Mill is 25 years old when ABC purchases a 5-year term insurance paying a benefit in the event the machine breaks down.

Given:

- (i) Annual benefit premiums of 6643 are payable at the beginning of the year.
- (ii) A benefit of 500,000 is payable at the moment of breakdown.
- (iii) Once a benefit is paid, the insurance contract is terminated.
- (iv) Machine breakdowns follow De Moivre's law with $l_x = 100 - x$.
- (v) $i = 0.06$

Calculate the benefit reserve for this insurance at the end of the third year.

- (A) -91
- (B) 0
- (C) 163
- (D) 287
- (E) 422