

## EXAM MLC QUESTIONS OF THE WEEK

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### Week of February 26/07

A special 20 year fully discrete endowment insurance policy is paid for by 10 level benefit premiums starting on the policy issue date. The policy provides a death benefit of the terminal benefit reserve for that year, and the endowment is \$1000. If  $i = .04$ , what is  ${}_5V$ ?

- A) 300      B) 305      C) 310      D) 315      E) 320

**The solution can be found below.**

## Week of February 26/07 - Solution

$${}_{20}V = 1000, b_h = {}_hV \rightarrow 1000 = \sum_{k=1}^{10} P \cdot (1.04)^{20-k+1} = P \cdot (1.04)^{10} \cdot \ddot{s}_{\overline{10}|0.04} \rightarrow P = 54.107$$
$$\rightarrow {}_5V = P \cdot \ddot{s}_{\overline{5}|} = (54.107) \cdot (5.633) = 304.78 . \text{ Answer: B.}$$