

ACTEX LTAM Study Manual

Spring 2020 Edition

Errata

Jan 1, 2020

C5-44 16: add (vi) $A_{80} = 0.54092$

C5-61 and C5-62 16: change 592.93 to 540.92, and the final answer to 800.85.

$$\text{C10-78 20(b)} \quad \frac{d}{dt} {}_tP_x^{02} = {}_tP_x^{00} \mu_{x+t}^{02} + {}_tP_x^{01} \mu_{x+t}^{12}$$

C12-75 9 Starting from line 3 of the expression at the middle: ... = 8.380037*S*

$$\text{last 2 lines: } \frac{8.380037S}{13.5498} = 0.618462S \text{ ... So the ratio is } 0.618462 / 1.03^{34} = 22.64\%$$

C12-78 12(b) The benefit related to past service is the accrual rate multiplied with the total salary earned from May 1, 2012 to April 30, 2022:

$$2.5\%(40000 + 40000 \times 1.035 + \dots + 40000 \times 1.035^9) = 0.025 \times 40000 \times \frac{1.035^{10} - 1}{0.035} = 11731.39$$

The benefit related to future services is $66674.013 - 11731.39 = 54942.62$.

T1-5 7 Change the first three options as (A) 53% (B) 63% (C) 73%

T1-18 Change the option of 7 from B to C (do the same T1-19 Q7)

$$\text{T1-20 line 1: } \frac{61.436416S}{13.5498 - 1} = 4.89541S \quad \text{line 3: So the ratio is } 4.89541 / 1.05^{39} = 73.01\%.$$