

SOA真题November2001Course5 PDF转换可能丢失图片或格式
， 建议阅读原文

https://www.100test.com/kao_ti2020/84/2021_2022_SOA_E7_9C_9F_E9_A2_98N_c50_84046.htm November 2001 Society of Actuaries COURSE 5 MORNING SESSION APPLICATION OF BASIC ACTUARIAL PRINCIPLES SECTION A-WRITTEN ANSWER COURSE 5: November 2001 - 2 - GO ON TO NEXT PAGE Morning Session **BEGINNING OF EXAMINATION 5** MORNING SESSION 1. (5 points) With respect to participating life insurance products, (a) Explain the rationale for offering participating products. (b) Describe the considerations in setting policyholder dividends. (c) Describe the concerns regulators have with policyholder dividends. 2. (6 points) Describe the rating variables that should be considered when developing group insurance medical claim costs. 3. (6 points) Describe each of the following provisions which can be included in an individual disability income contract: (a) Residual Disability Income Benefit. (b) Guaranteed Insurability Option Benefit. and (c) Cost Of Living Benefit. COURSE 5: November 2001 - 3 - GO ON TO NEXT PAGE Morning Session 4. (5 points) You are given the following retirement plan information for an individual: Current Age 40 Entry Age 30 Retirement Age 65 Social Security Benefit \$11,700 Current Salary \$80,000 Annual Salary Growth 3% Personal Savings Accumulation Rate 7% Final Salary (at age 64) \$162,624 Retirement Benefit 1% of final 5-year average salary times years of service Annuity Conversion Factor @ age 65 8.1958 The individual begins saving for retirement at

his current age. Calculate the level percent of salary that should be allocated to personal savings each year to provide this individual with a 70% full replacement ratio. Show all work.

5. (8 points) Describe the following reserve methods for life insurance products: (a) simplified net premium method. (b) realistic net premium method. (c) gross premium method. and (d) accumulation method.

COURSE 5: November 2001 - 4 - GO ON TO NEXT PAGE Morning Session

6. (5 points) You are given the following information for a defined benefit plan:

Plan Effective Date: 01/01/2001
Plan Year = Calendar Year
Normal Retirement Benefit: 2% of final three-year average pay for each year of service
Actuarial Cost Method: Entry Age Normal
Actuarial Assumptions: Interest: 8.00%
Salary Scale: 5.00%
Preretirement termination other than death: None
Data for the 10 active participants as of 1/1/2001 (there are no inactive participants):
Age: 45
Past Service: 5 years
2001 Salary: \$25,000
Plan Assets at 1/1/2001: 0
Selected annuity values: $a_{\overline{10}|g} = a_{\overline{10}|10\%} = 7$
Selected Commutation Functions: $X_{DXNXN-65} = SXSXN - SN654024532001.000071004518021001.27635000655003.38640$
The supplemental liability is amortized over 10 years.

Determine the annual cost as of December 31, 2001 for the 2001 plan year based on an initial valuation as of January 1, 2001. Show all work.

COURSE 5: November 2001 - 5 - GO ON TO NEXT PAGE Morning Session

100Test 下载频道开通，各类考试题目直接下载。详细请访问 www.100test.com