

SOA真题May2005Course6 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_98M_c50_84137.htm Course 6: Spring 2005 - 1 - GO ON TO NEXT PAGE Morning Session COURSE 6 MORNING SESSION SECTION A WRITTEN ANSWER Course 6: Spring 2005 - 2 - GO ON TO NEXT PAGE Morning Session

****BEGINNING OF EXAMINATION**** MORNING SESSION 1. (5 points) Your company is evaluating active and quasi-passive investment strategies for bond portfolio management. (a) Define each quasi-passive indexation approach. (b) Describe the advantages and disadvantages of each quasi-passive indexation approach. (c) Explain the reasons your company would consider an active investment strategy. (d) Describe the sector and security strategies that an active investment manager would use to select individual bonds. 2. (7 points) Your company is offering a 15-year term-certain immediate annuity with payments linked to the CPI. Policyholders can withdraw funds on demand at market values. The universe of available investments consists of the following: #8226. Real return public bonds #8226. Real estate (a) Outline the advantages and disadvantages of each investment for backing this annuity. (b) Recommend an investment strategy using the investments available. (c) Describe the major components of an accumulated cash flow scenario-based model. (d) Outline the major components of the investment policy statement for this product. Course 6: Spring 2005 - 3 - GO ON TO NEXT PAGE Morning Session 3. (5 points) You are

given the following information: Bond Term Effective Duration
 Effective Convexity A 5 3.1 -41.7 B 5 4.5 23.4 C 5 4.2 21.3 D 5 2.7
 64.5 The option and price characteristics of Bonds A, B, C and D are
 as follows: #8226. one bond is option-free with a current price below
 par #8226. one bond is putable, priced at par (a) Determine the
 option and price characteristics corresponding to each of Bonds A,
 B, C and D. Explain your answer. (b) Assess the limitations of
 duration as an interest rate risk measure. (c) Define convexity.
 Compare effective convexity and modified convexity. (d) Calculate
 the approximate percentage price change for Bonds A and B
 assuming a decrease in yield of 0.50%. Show all work. Course 6:
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 points) You are given the following with respect to treasury securities
 as of today, May 13, 2005: Security Years to Maturity Annual
 Coupon Rate Paid Semi-annually Yield-to-maturity A 0.5 0% 3.0%
 B 1.0 0% 3.2% C 1.5 6% 3.5% D 2.0 5% 3.6% (a) Calculate the spot
 rate for each maturity date. (b) Explain how arbitrage profits could
 be made from coupon stripping. (c) Calculate the one-year forward
 rate, one year from today. (d) With respect to the pure expectations
 theory (i) Describe the theory (ii) Describe the interpretations of the
 theory that have been put forth by economists (iii) Explain the
 shortcomings of the theory (e) With respect to other theories of term
 structure of interest rates: (i) Briefly describe each theory (ii) Using
 each theory, compare the one-year spot on May 13, 2006, with the
 one-year forward rate calculated in (c) Show all work. Course 6:
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points) You are given the following information with respect to Stock XYZ: $\sigma = 4\%$, $r_L = 4\%$, time interval between nodes: 1 year (a) Calculate the one-year spot rate. (b) Calculate the two-year spot rate. (c) Calculate the one-year implied forward rate. (d) Calculate the value of the option in Bond B. Show all work. 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