

SOA真题May2004Course6 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_84020.htm COURSE 6MORNING

SESSIONSECTION A WRITTEN ANSWERCourse 6: Spring 2004

- 1 - GO ON TO NEXT PAGEMorning Session**BEGINNING OF

EXAMINATION**MORNING SESSION1. (4 points) Outline the

key characteristics of securities regulations and restrictions in effect in

the United States.2. (6 points) You are given the following:Scenario 1

Scenario 2 Scenario 3Probability 45% 40% 15%Stock A Return 30%

2% -10%Stock B Return -8% 15% 5%Stock C Return 8% 4%

-10%T-bills Return 3% 3% 3%An investor

has:#61472.#8226.#61472.a risk aversion of

4#61472.#8226.#61472.two types of bonds are available with par

values of 100:(i) 5-year zero coupon callable bonds, callable at 80

after two years of callprotection(ii) 10-year zero coupon putable

bonds, putable to issuer at 40 after three years(iii) market prices are

given in the table below:Market Date PriceCallable Bond Putable

BondDecember 31, 2003 70 50December 31, 2004 100 50December

31, 2005 90 60December 31, 2006 70 60#61472.#8226.#61472.CMO

A is backed by 7.5% pass-throughs consisting of the following

tranches:#61472.#8226.#61472.5-year very accurately defined

maturity (VADM)#61472.#8226.#61472.10-year

sequential-pay#61472.#8226.#61472.CMO B is backed by 7.5%

pass-throughs consisting of the following

tranches:#61472.#8226.#61472.7-year

PAC#61472.#8226.#61472.10-year
PAC#61472.#8226.#61472.20-year
companion#61472.#8226.#61472.3-year
sequential-pay#61472.#8226.#61472.10-year
sequential-pay#61472.#8226.#61472.the common shares of each
company are currently trading at 30 as of December 31,
2003#61472.#8226.#61472.there are no taxes or transaction
costs#61472..an industry analyst has projected the possible
stock prices over the next two years as a function of the performance
of the US economy: US Economy Company A Company B
2004 2005
December 31, 2004 December 31, 2005 December 31,
2004 December 31, 2005 Expansion Expansion 32 33 33 36 Expansion
Recession 32 30 33 30 Recession Expansion 30 29 29 29 Recession
Recession 30 30 29 27 (a) Determine if the analyst ' s projections
allow for arbitrage. (b) Using the analyst ' s projections, determine
the value of a European put option on Company B ' s stock if the
option expires on December 31, 2005, and has an exercise price of
30. (c) Determine how an investor could replicate the payoff of a
one- year European call option with an exercise price of 31 on
Company A ' s stock using a portfolio of the two companies
common shares. Show all work. Course 6: Spring 2004 - 5 - GO ON
TO NEXT PAGE Morning Session 100 Test 下载频道开通 , 各类
考试题目直接下载。 详细请访问 www.100test.com