



SII MASTERS SAMPLE EXAM QUESTIONS

PORTFOLIO CONSTRUCTION THEORY

DATE OF EXAM

3 HOURS

RUBRIC

SECTION A – answer **ALL** parts of the question in this section
SECTION B – answer **ALL** parts of the question in this section
SECTION C – answer **TWO** questions in this section
SECTION D – answer **ALL** parts of the question in this section
SECTION E – answer **TWO** questions in this section

Candidates are reminded that no marks will be awarded for illegible work

NOTES TO CANDIDATES

1. Please insert your Candidate Number on the Answer Book covers. *Do not insert your name.* Please use **Answer Book 1** for Sections A, B and C and **Answer Book 2** for Sections D and E.
 2. Show *all* workings in your Answer Books.
 3. Candidates may attempt the sections in any order. Please indicate clearly in your Answer Books which questions you are answering.
 4. Please insert in the box provided on the cover of your Answer Books the numbers of the questions you have attempted in the order in which they appear in the Answer Books.
 5. You may use the calculator provided or one approved by the Securities & Investment Institute.
 6. You must hand your Answer Books to an invigilator before you leave the Examination Hall. *Failure to do so will result in disqualification.*
 7. The decision of the panel is final and no correspondence will be entered into concerning the grade awarded.
 8. Once submitted, the examination scripts become the property of the Securities & Investment Institute and will not be returned to candidates.
-

© Securities & Investment Institute 2008

All Rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage or retrieval system without prior permission from the Securities & Investment Institute.

PLEASE TURN OVER WHEN INSTRUCTED

SECTION A**TOTAL 40 MARKS**

Answer ALL parts of the question in this section.

- 1 Investment management firm Capitalisation launched a new UK equity unit trust on 1 January 2004. The unit trust is called the Gain Fund. The fund has an active growth investment style. The management team at Capitalisation has decided to operate the fund on a dual price (i.e. bid - offer) basis. At fund inception all subscriptions immediately purchase securities and the fund is fully invested. Jo Smithers invests a lump sum of £1,000 on 1 January 2004. Jim Smiley invests £1,000 as £250 lots on the first day of each month. Table 1 documents the bid-offer prices.

2004	bid (£ pence)	offer (£ pence)	mid (£ pence)
1 Jan	100.0	96.5	98.3
1 Feb	98.3	94.9	96.6
1 Mar	97.1	93.7	95.4
1 Apr	100.4	96.9	98.6
1 May	102.8	99.2	101.0

- a) At 1 May 2004, how many units does Jo and Jim each have? (5 marks)
- b) How much has Jo paid in stamp duty? Show all workings (4 marks)
- c) Unforeseen life events mean that Jo and Jim each have to redeem their investments in full on 1 May 2004. What is the UK£ amount Jo and Jim receive and what is the percent return on their original investments? (5 marks)
- d) What is the name given to Jim's style of investing? (2 marks)

In the unit trust report and accounts Jim finds references to a number of revenues and costs that apply to the fund:

Custody
Fund accounting
Depositary
Trade commission
Market spread on the portfolio securities
Investment manager
Tax
Dividends
Interest

- e) Which item(s) from the list above comprise the bid offer spread? (2 marks)
- f) Which item(s) from the list above go into the daily calculation of the net asset value? (2 marks)

Gain's fund manager, Katy Cinch, wishes to add a stock to the portfolio. Buy side analyst Pete Chrome has emailed his three favourite stocks. Table 2 contains a summary of the three stocks:

Table 2					
	Price book ratio	Price earnings ratio	2 years earnings growth	Dividend yield	Beta
Pips plc	1.3	5	6	6	0.8
Greyhound plc	4	10	13	3.2	0.9
Cromer plc	15	25	17	na	1.5

- g) What is Katy's likely opinion on the suitability of Pips plc? (4 marks)
- h) What is Katy's likely opinion on the suitability of Greyhound plc? (4 marks)
- i) What is Katy's likely opinion on the suitability of Cromer plc? (4 marks)

It is the start of 2007. The Gain Fund is failing to attract significant net new subscriptions. On 8 January the Chief Investment Officer holds a meeting with Katy Cinch the fund manager, and the fund accountant. At the meeting the fund accountant shows a typical 5 day period of the fund's inflows and outflows. This detail is presented in Table 3.

Table 3		
2007	subscriptions (£)	redemptions (£)
1 Jan	50,000	66,000
2 Jan	41,000	40,000
3 Jan	72,500	65,000
4 Jan	63,000	55,000
5 Jan	45,000	52,000

The fund accountant suggests the fund can be made more attractive by eliminating the fund's dual pricing structure. He suggests that a single mid-pricing structure could be introduced with a 0.25% initial charge and 0.25% exit charge. Assume the bid-offer spread has stayed the same since 2004, as shown in Table 1 and equals offer price – bid price / mid price.

- j) If a new client invests a lump sum of £1000 on 1 January 2007 and redeems the entire amount on 1 May 2007, what percent of the investment is lost under the dual (bid - offer) pricing system and what percent would be lost under the single mid-pricing system? (4 marks)
- k) What is occurring in the fund that allows the fund accountant to recommend a switch from dual pricing to single pricing? (3 marks)

(Total 40 marks)

SECTION B**TOTAL 20 MARKS**

Answer ALL parts of this question

- 2 What does risk mean in an investment context? What techniques do investment managers employ to reveal clients' risk profiles? What drawbacks do you see with this process?

(20 marks)

SECTION C**TOTAL 10 MARKS**

This section normally contains THREE questions and candidates should answer TWO questions. Each question carries 5 marks.

- 3 Answer parts a and b:

- a) What is the beta of a stock if the covariance of the stock with the market portfolio is 0.23, and the standard deviation of the market returns is 0.32?
- b) What is the expected rate of return for a stock that has a beta of 1.2 if the risk-free rate is 6 percent and the expected return on the market is 12 percent?
Show all working.

(5 marks)

- 4 Answer parts a and b:

- a) Why is cash both a risk-free and a risky asset?
- b) Why might increasing the proportion of cash in a person's retirement savings as they near retirement be inappropriate if the portfolio manager knows an annuity will be purchased at retirement?

(5 marks)

SECTION D**TOTAL 20 MARKS**

Answer ALL parts of the question in this section.

- 5 Michael Jones is a high net worth individual, having made a significant fortune from the dot com boom. He is 44 and will soon get married to Jessica Bourne who is 37. Michael has come to you for some investment and tax advice in advance of his wedding and has asked you a number of questions. Both Michael and Jessica are UK citizens and have resided in the UK all their lives. Both are domiciled in the UK.

Both have their own homes in the UK which they are planning to sell in order to buy a new residence (with a large garden) in the UK together.

Both have considerable investments in shares and commercial buildings. They are also considering buying a large residential property abroad together, probably in Portugal.

Michael will dispose of some shares in Barclays Bank to pay for this house. He purchased these shares in 1980.

Both Michael and Jessica have two children and they would like to establish trust funds for their education. Jessica is worried about inheritance taxes on some assets she will receive from her father Derek and would like to know if there is any simple planning that can be undertaken to minimise taxes.

- a) Advise Jessica on some inheritance tax planning opportunities she and her father might undertake to minimise future inheritance taxes. (5 marks)
- b) Advise Michael and Jessica on the capital gains tax implications of the sales of their residences and the purchase of their new residence in the UK. (5 marks)
- c) Advise Michael on how the acquisition cost of his Barclays shares is calculated given that they were purchased prior to 31 March 1982. (5 marks)
- d) Advise Michael and Jessica on the taxation implications of the purchase of their residence in Portugal if they decide to sell it in the future and they remain resident and domiciled in the UK. (5 marks)

(Total 20 marks)

SECTION E

TOTAL 10 MARKS

This section normally contains THREE questions and candidates should answer TWO questions. Each question carries 5 marks.

- 6 James Seymour died on the 6th June in the UK. His estate at the date of death comprised a private residence valued at £750,000, land in the value of £300,000 and UK shares totalling £150,000.

There was an outstanding mortgage on the principal private residence of £150,000 with ABC Bank plc and another mortgage on the land amounting to £50,000.

Calculate the liability to inheritance tax on the chargeable estate. (5 marks)

- 7 Mary Jenkins purchased four Chippendale chairs for £30,000. She sold one chair for £18,000. The remaining three chairs are valued at £64,000.

Calculate the post-indexation capital gain on the chair that was sold. (5 marks)