Chartered
Insurance
Institute

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment Planning

June 2021 Examination Guide

SPECIAL NOTICES

Candidates entered for the October 2021 examination should study this examination guide carefully in order to prepare themselves for the examination.

Practice in answering the questions is highly desirable and should be considered a critical part of a properly planned programme of examination preparation.

AF4 – Investment planning

Contents

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IMPORTANT GUIDANCE FOR CANDIDATES

Introduction

The purpose of this Examination Guide is to help you understand how examiners assess candidates' knowledge and their ability to apply this to a case study scenario. You can then use this understanding to help you in your preparation for the examination.

Before the examination

Study the syllabus carefully
This is available online at www.cii.co.uk. All the questions in the examination are based directly on the syllabus. *You will be tested on the syllabus alone,* so it is vital that you are familiar with it.

There are books specifically produced to support your studies that provide coverage of all the syllabus areas, however you should be prepared to read around the subject. This is important particularly if you feel that further information is required to fully understand a topic or an alternative viewpoint is sought. The reading list which can be found with the syllabus provides valuable suggestions.

Note the assumed knowledge
For the Advanced Diploma in Financial Planning, candidates are assumed to have studied the relevant units of the Diploma in Financial Planning or the equivalent. This knowledge is set out on the relevant syllabus.

Read widely
If you do not have experience in advising clients whose financial needs are relatively sophisticated, *it is quite unrealistic to expect that the study of a single textbook will be sufficient to meet all your requirements.* While books specifically produced to support your studies will provide coverage of all the syllabus areas, you should be prepared to read around the subject. This is important, particularly if you feel that further information is required to fully understand a topic or an alternative viewpoint is sought. It is vital that your knowledge is widened beyond the scope of one book. The reading list which can be found with the syllabus provides valuable suggestions.

Make full use of the Examination Guide
This Examination Guide contains a full examination paper and model answers. The model answers show the types of responses the examiners are looking for and which would achieve maximum marks, *however, you should note that there are alternative answers to some question parts which would also gain high marks.* For the sake of clarity and brevity not all of these alternative answers are shown.

This guide and previous Examination Guides can be treated as 'mock' examination papers. Attempting them under examination conditions as far as possible, and then comparing your answers to the model ones, should be seen as an essential part of your exam preparation. The examiner's comments on candidates' actual performance in each question provide further valuable guidance. You can obtain copies of the two most recent examination guides free of charge at www.cii.co.uk.

Know the layout of the tax tables
Familiarise yourself with the information contained within the tax tables printed at the back of each Examination Guide. These tax tables will be provided to candidates as part of the examination paper. The tax tables enable you to concentrate on answering the questions without having to worry about remembering all the information. *Please note that you are not allowed to take your own tax tables into the examination.*

Know the structure of the examination
Assessment is by means of a three-hour written paper in two sections. All questions are compulsory:

Section A consists of one case study, worth 80 marks. You will be expected to carry out a variety of tasks, after analysing the information provided.

Section B consists of two shorter case studies worth a total of 80 marks. Again you will be expected to carry out a variety of tasks based upon the information provided.

Each question part will clearly show the maximum marks which can be earned.

Appreciate the standard of the examination
Candidates must demonstrate that they are capable of advising clients *whose overall levels of income and capital require a more sophisticated scheme of investment* than is normally prepared by a level 4 qualified adviser. These clients require a critical appraisal of the various financial planning options available to them.

Read the Assessment information and Exam policies for candidates
The details of administrative arrangements and the regulations which form the basis of your examination entry are available online at www.cii.co.uk/qualifications/assessment-information/introduction/. This is *essential reading* for all candidates. For further information contact Customer Service.

In the examination

The following will help:

Spend your time in accordance with the allocation of marks:

- The marks allocated to each question part are shown on the paper.
- If a question has just two marks allocated, there are likely to be only one or two points for which the examiner is looking for, so a long answer is wasting valuable time.
- Conversely, if a question has 12 marks allocated, a couple of lines will not be an adequate answer. Always remember that if the paper is not completed, your chances of passing will be reduced considerably.
- Do not spend excessive time on any one question; if the time allocation for that question has been used up, leave some space, go on to the next question and return to the incomplete question after you have completed the rest of the paper, if you have time.

Take great care to answer the question that has been set.

- Many candidates leave the examination room confident that they have written a 'good' paper, only to be surprised when they receive a disappointing result. Often, the explanation for this lies in a failure to think carefully about what the examiner requires before putting pen to paper.
- Highlighting key words and phrases is a technique many candidates find useful.
- The model answers provided in this Examination Guide would gain full marks. Alternative answers that cover the same points and therefore answer the question that has been asked would also gain full marks.

Tackling questions

Tackle the three questions in whatever order feels most comfortable. Generally, it is better to leave any questions which you find challenging until you have attempted the questions you are confident about. Candidates' should avoid mixing question parts, (for example, 1(a)(i) and (ii) followed by 2(b)(ii) followed by 1(e)(i)) as this often leads to candidates unintentionally failing to fully complete the examination paper. This can make the difference between achieving a pass or a narrow fail.

It is vital to label all parts of your answer correctly as many questions have multiple parts to them (for example, question 1(a) may have parts (i), (ii) and (iii)). Failure to fully distinguish between the separate question parts may mean that full credit cannot be awarded. It is also important to note that a full answer must be given to each question part and candidates should not include notes such as 'refer to answer given in 1(b)(i)'.

Answer format

Unless the question requires you to produce an answer in a particular format, such as a letter or a report, you should use 'bullet points' or short paragraphs. The model answers indicate what is acceptable for the different types of question.

Where you are asked to perform a calculation, it is important to show **all** the steps in your answer. The majority of the marks will be allocated for demonstrating the correct method of calculation.

Provided handwriting is legible, candidates will **not** lose marks if it is 'untidy'. Similarly, marks are not lost due to poor spelling or grammar.

Calculators

If you bring a calculator into the examination room, it must be a silent, battery or solar-powered, **non-programmable** calculator. The use of electronic equipment capable of being programmed to hold alphabetical or numerical data and/or formulae is prohibited. You may use a financial or scientific calculator, provided it meets these requirements. The majority of the marks will be allocated for demonstrating the correct method of calculation.

EXAMINERS' COMMENTS

Candidates' overall performance

Overall candidates performed slightly better in this paper than in October 2020.

The paper was constructed in a way that allowed all candidates the opportunity to perform to a pass standard, while offering better-prepared candidates the potential to excel. It offered a broad mix of core areas of the syllabus, which are tested frequently, complemented by peripheral content, which are tested less frequently.

Some areas of the syllabus were tested for the first time and in general, candidates performed adequately on these new areas. Candidates also performed well in question-parts where they were required to refer back to the case study to generate answers in line with the requirements of the question-part.

Where candidates did not perform well, there was a tendency for repetition of the same points several times within a question-part and duplication of content across different parts of the same question.

Some candidates wrote expansive, narrative-style answers, which often did not translate into them being awarded more marks. In contrast, candidates answering with a succinct, bullet-point focused style were more effective. This style of answer, especially when aligned with the requirements of the question and number of available marks, allowed candidates to demonstrate their knowledge efficiently.

In calculation question-parts, most candidates who showed all their workings were able attain the majority or all of the marks available. Where candidates did not achieve this was due to not following the instruction '**showing all your workings**'.

A well-prepared candidate having undertaken robust revision would have been able to achieve the pass standard.

Question 1

Overall part (a) candidates performed very well, with the majority of candidates gaining over half of the available marks. In part (a)(i), most candidates knew the Capital Asset Pricing Model (CAPM) formula while in part (a)(ii), most candidates identified the marks for 'minimal/no default risk' and 'short duration'. In part (a)(iii), almost all candidates performed well.

In part (b)(i), while few candidates gained the mark for 'weighted', the majority were able to still attain at least three out of the five marks available. Part (b)(ii) tested a well-known definition and is seen regularly in the AF4 paper; almost all candidates achieved all of the available marks. Part (b)(iii), a new area, saw candidates not performing well. However, those candidates who did not perform well were often still able to attain a mark for 'Reduce duration/interest rate risk'.

In part (c)(i), it was pleasing to see that almost all candidates achieved maximum marks. Those candidates who did not achieve maximum marks often did not state the correct time period. In part (c)(ii), candidates performed adequately. It was disappointing to see many candidates simply repeating the "rates to reduce" from the question in their answer. Also, as is often the case with questions testing economics, many candidates stated the inverse position, e.g. increase in inflation expectations. In part (c)(iii), candidates performed very well with most being awarded two or three marks with several candidates achieving the maximum marks available.

In part (d) candidates did not perform well. While NS&I products are mainstream, they are not routinely advised upon and therefore the general level of knowledge of the product suite is low. Many candidates answered based upon other NS&I products or based upon investment bonds, which are completely different types of product. In addition, many candidates believed that NS&I products fall under the FSCS deposit limits and so were not able to awarded at least two of the available mark in part (d)(i) and one of the available marks in part (d)(ii).

In part (d)(iii) candidates performed very well, especially in respect of the 'maximum deposit £50,000' mark. This was pleasing as the figure was not stated and therefore candidates had to know this figure and then determine it from the case study and question, as the portfolio size was larger than the product's upper investment limit.

Overall part (e) was answered well by candidates. Part (e)(i) used a two-factor calculation and candidates who did not perform well did not show their workings and so were not able to achieve many of the marks available. In parts (e)(ii) and (e)(iii) candidates performed very well, with only a small number of candidates not gaining full marks in part (e)(iii).

In part (f) candidates performed adequately. Efficient market hypothesis (EMH) has been tested in another of its forms in a recent paper, so better-prepared candidates were able to gain from across the available marks. Those candidates who did not perform well made general statements about Modern Portfolio Theory (MPT) or CAPM, with many duplicating their answer to part (a)(iii).

Overall candidates performed adequately in part (g), with most achieving over half of the available marks. Candidates who did not perform well mainly identified factors relating to an annual review and/or general financial planning considerations, thereby not meeting the requirements of the question.

Question 2

In part (a) candidates performed well. It was pleasing to see many candidates identify 'Capacity for loss' as it showed they were referring back to the case study where it was not stated. Conversely, candidates who did not perform well duplicated information that was contained in the case study, notably 'attitude to risk', as well as general financial planning factors that were not relevant to the question.

Overall candidates performed very well in part (b). It was pleasing to see in part (b)(i) almost all candidates were awarded maximum marks. Those who were not either did not show all their workings or, in a small number of candidates, believed that dividends were taxed at 40%. In part (b)(ii), a good number of candidates gained all the available marks. In part (b)(iii), almost all candidates recognised the potential drawback relating to the level of potential Income Tax relief, with some better-prepared candidates also identifying the drawback 'not covered at all by FSCS'. In part (b)(iv) candidates performed adequately but many candidates stated various risks applicable to any investment rather than those distinct to a VCT.

In part (c) candidates performed adequately. Candidates often did not perform well in questions testing investment bonds, especially when two different structures were being compared. So, it was pleasing to see that most candidates had a basic understanding of the differences. Candidates who did not perform well either hedged their answers stating the same treatment for both structures and/or stated what they did know about investment bonds, despite it not being aligned with the requirements of the question. Candidates who did perform well in general set out a table with two columns, setting out distinct features of each structure on either side, understanding that marks were being awarded for the related feature for each structure.

In part (d) candidates performed well. This area of the syllabus has been tested recently and candidates clearly had studied previous examination guides as their format was closely aligned with the requirements of the question. However, many candidates identified the two correct reasons but then stated the incorrect type of asset allocation.

Question 3

Overall part (a) was well answered by candidates. In part (a)(i), the model answer allowed full marks to be awarded for showing workings as it is set out in the study text. Candidates who set out their workings on this basis were awarded all the available marks. In part (a)(ii), candidates performed adequately with those candidates who did not deduct the running yield from the redemption yield rather than the other way around. In part (a)(iii) candidates who performed well showed a good level of understanding of the data contained within the table in the case study and were able to use this in their answer to part (a)(ii), being awarded the 'running yield lower than annual coupons/issue yield' and 'running yield higher than redemption yield' marks.

In part (b) candidates performed adequately. The differences between direct and collective investments is a core syllabus area but was applied here to gilts, a syllabus area in which candidates often do not perform well. Overall, candidates performed well on the benefits and drawbacks from the collective funds perspective but not well on those related to direct gilts. In part (b)(ii) it was pleasing to see candidates gaining the marks for 'loss of known redemption date' and 'daily dealing'. In part (b)(iii), several candidates achieved the maximum marks available.

In part (c) candidates performed well. This syllabus area is tested regularly and it is likely that candidates had undertaken robust revision, allowing many candidates to achieve the maximum marks in part (c)(i) with most candidates also gaining both of the available marks in part (c)(ii). Where candidates did not perform well in part (c)(i) this was the result of applying incorrect values to their calculations.

Overall candidates did not perform well in part (d). Many candidates either stated the main types of passive index replication or listed various types of investment products that could be used to invest in equities. Some better-prepared candidates were able to use the case study to identify 'earnings growth' and/or 'dividend cover' with a small number of candidates also identifying 'weighting'.

Chartered Insurance Institute

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment planning

June 2021 examination

SPECIAL NOTICES
All questions in this paper are based on English law and practice applicable in the tax year 2020/2021, unless stated otherwise in the question, and should be answered accordingly.
It should be assumed that all individuals are domiciled and resident in the UK unless otherwise stated.

Instructions

- Three hours are allowed for this paper.
- **Do not begin writing until the invigilator instructs you to.**
- **Read the instructions on page 3 carefully before answering any questions.**
- Provide the information requested on the answer book and form B.
- You are allowed to write on the inside pages of this question paper, but you must **NOT** write your name, candidate number, PIN or any other identification anywhere on this question paper.
- The answer book and this question paper must **both be handed in personally by you** to the invigilator before you leave the examination room. **Failure to comply with this regulation will result in your paper not being marked and you may be prevented from entering this examination in the future.**

Unit AF4 – Investment planning

Instructions to candidates

Read the instructions below before answering any questions

- **Three hours** are allowed for this paper which carries a total of 160 marks as follows:

- Section A: 80 marks
- Section B: 80 marks

- You are advised to spend approximately 90 minutes on Section A and 90 minutes on Section B.

- You are strongly advised to attempt **all** questions to gain maximum possible marks. The number of marks allocated to each question part is given next to the question and you should spend your time in accordance with that allocation.

- Read carefully all questions and information provided before starting to answer. Your answer will be marked strictly in accordance with the question set.

- You may find it helpful in some places to make rough notes in the answer booklet. If you do this, you should cross through these notes before you hand in the booklet.

- It is important to show all steps in a calculation, even if you have used a calculator.

- If you bring a calculator into the examination room, it must be a silent, battery or solar-powered, non-programmable calculator. The use of electronic equipment capable of being programmed to hold alphabetic or numerical data and/or formulae is prohibited. You may use a financial or scientific calculator, provided it meets these requirements.

- Tax tables are provided at the back of this question paper.

- Answer each question on a new page and leave six lines blank after each question part.

Subject to providing sufficient detail you are advised to be as brief and concise as possible, using note format and short sentences on separate lines wherever possible.

SECTION A

This question is compulsory and carries 80 marks

Question 1

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the clients' circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c), (d), (e), (f) and (g) which follow.

Lachlan is a financial adviser within an authorised advisory firm. He is preparing for an annual review meeting with an existing retail client. The client has an investment portfolio currently valued at £235,000 that consists of several UK fixed interest collective funds. These funds pay distributions at varying frequencies which the client receives as income.

In advance of the meeting, the client has expressed concerns about the economic outlook and believes that the UK will soon enter a recession. In response to these concerns, the client has asked Lachlan about National Savings & Investments (NS&I) products, in particular whether Income Bonds and Premium Bonds may be suitable assets to own.

In preparation for the meeting, Lachlan is evaluating the investment portfolio and considering what action the fund managers are likely to take in response to an economic slowdown. Lachlan has read the managers' reports and factsheets, which reveal that some of the funds have been altering their duration in anticipation of changes to interest rates. Lachlan is also assessing the portfolio's expected performance over the next 12 months, using assumptions set out in Table 1 below:

Table 1

Expected market return	Risk-free rate of return	Portfolio beta
3.3%	0.2%	0.91

In previous review meetings, the client has expressed doubts over the value added by fund managers and believes that it is difficult for any manager to outperform the market. In this respect, Lachlan is studying the efficient market hypothesis (EMH).

In assessing the portfolio, Lachlan has also identified the returns in each of the past two years as set out in Table 2 below:

Table 2

	Year 1	Year 2
Actual returns	-0.4%	7.3%

Questions

*To gain maximum marks for calculations you **must** show **all** your workings and express your answer to **two** decimal places.*

(a) **(i)** Using the Capital Asset Pricing Model (CAPM) equation, calculate, **showing all your workings**, the expected return for the client's portfolio. **(5)**

(ii) Explain why UK Government Treasury bills are a suitable measure of risk-free return to use in the CAPM equation. **(4)**

(iii) State **seven** main assumptions upon which the CAPM equation is based. **(7)**

(b) **(i)** Describe briefly Macaulay duration. **(5)**

(ii) Explain briefly what is measured by modified duration. **(4)**

(iii) State **one** reason why a fixed interest fund manager would use **Macaulay** duration and **one** reason why a fixed interest fund manager would use **modified** duration within a bond fund. **(2)**

(c) **(i)** State the technical definition of a recession in the UK economy. **(5)**

(ii) Describe briefly the **four** main factors that cause UK interest rates to reduce.
You should exclude recession/economic activity from your answer. **(4)**

(iii) State **four** changes that could be made within the client's fixed interest portfolio in the event of an anticipated recession. **(4)**

(d) **(i)** State the main product features of NS&I Income Bonds. **(6)**

(ii) List **three** benefits of investing in NS&I Income Bonds. **(3)**

(iii) Identify **two** limitations on the use of NS&I Premium Bonds within the client's portfolio. **(2)**

(e) **(i)** Calculate, **showing all your workings**, the portfolio's standard deviation using the returns data for the past two years. **(9)**

(ii) Describe briefly what standard deviation measures. **(4)**

(iii) State the percentage of returns that fall within **one** and **two** standard deviations, based upon the normal distribution of returns of a bell curve. **(2)**

(f) **(i)** Describe the semi-strong form of efficient market hypothesis (EMH). **(7)**

(ii) State how the semi-strong form of EMH considers technical analysis and fundamental analysis. **(2)**

(g) Identify **five** factors that should be taken into consideration if it is agreed at the meeting to rebalance the portfolio. **(5)**

Total marks available for this question: (80)

SECTION B

Both questions in this section are compulsory and carry an overall total of 80 marks

Question 2

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the client's circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c) and (d) which follow.

Fenna, aged 38, has recently sold her business and will receive £525,000 after accounting for Capital Gains Tax. She is seeking advice on how to invest this capital. A condition of the sale is that she remains employed as a director of the business for at least the next three years and she is paid a salary of £80,000 per annum.

Fenna is a UK resident and domiciled for tax purposes but was born in the Netherlands. She is unsure whether she will remain in the UK after her employment with the business has ended or move abroad. In discussion with Fenna's financial adviser, the potential benefits of an offshore investment bond have been discussed and she is keen to understand more about the differences between onshore and offshore bonds.

Fenna has a shareholding in a technology company traded on AIM, details of which are set out in Table 1 below:

Table 1

Number of shares held	Current share price	Most recent dividend per share
22,000	145p	12.5p

Fenna is pleased with the performance of this investment and has read about Venture Capital Trusts (VCTs) that invest solely in the technology sector. She wishes to explore how a VCT could be used for some of the sale proceeds, to combine both investment and tax planning. She has a medium to high attitude to risk and is prepared to invest for the medium to long-term, with the objective of capital growth and income.

While Fenna's current salary is more than sufficient to meet her income needs, she would like to be able to generate an income stream of £20,000 per annum in real terms from her capital in 15 years' time.

Questions

*To gain maximum marks for calculations you **must** show **all** your workings and express your answer to **two** decimal places.*

(a) List **seven** additional pieces of information relating to Fenna's financial situation that a financial adviser would consider when determining her objectives and needs. *You should exclude the information provided in the case study from your answer.* **(7)**

(b) **(i)** Calculate, **showing all your workings**, the most recent dividend Fenna received, net of any tax, from her technology company shares. *You should assume this is the only dividend Fenna receives.* **(6)**

(ii) Explain the tax treatment of any investment that Fenna might make into a new VCT. **(8)**

(iii) State **two** potential drawbacks that Fenna's financial adviser would draw to her attention in respect of the proposed level of investment, if she wanted to invest £95,000 in a new VCT at issue. **(2)**

(iv) Identify **four** additional risks to which Fenna would be exposed if she invested into a VCT in comparison to her AIM shareholding. **(4)**

(c) Compare the main differences in the tax treatment of the gains and withdrawals from onshore and offshore investment bonds, based upon Fenna's investment needs. **(10)**

(d) State whether strategic or tactical asset allocation would be more suitable for Fenna given her objectives and give **two** reasons for your choice. **(3)**

Total marks available for this question: 40

Question 3

Read carefully all information provided in the case study before attempting the questions. Your answers should take into account the client's circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c) and (d) which follow.

Simon is an investment adviser with an authorised firm. He has just met with a potential new retail client and is reviewing their existing investments.

The client has £350,000 invested equally between two UK conventional gilts on a direct basis. Details of one of the gilts is set out in Table 1 below:

Table 1

Gilt	Current price	Years to redemption	Half yearly coupon
X	£132.56	12	£1.45

In addition, the client holds a collective fund that tracks the FTSE-100 index. The client is disappointed with the performance of this fund, as it appears to have underperformed the Index in recent years and not met his objectives of capital growth and rising income, while still charging a high annual management charge. Simon is researching smart beta products as potential alternate products.

The client also owns shares in a FTSE-SmallCap listed company, Garden Finch plc. Details of the existing holding in Garden Finch are set out in Table 2 below:

Table 2

Existing shareholding	Current share price	Current value
9,500	87.2p	£8,284

Garden Finch has recently announced it intends to acquire a competitor, financed by way of a rights issue. The company plans to issue 15,000,000 shares on a 2 for 5 basis at a price of 71p. The client has asked Simon for guidance on the options open to him and the likely effect on his holding if the rights issue proceeds.

Questions

*To gain maximum marks for calculations you **must** show **all** your workings and express your answers to **two** decimal places.*

(a) **(i)** Calculate, **showing all your workings**, the redemption yield for Gilt X. *You should use the simplified method in your answer.* **(7)**

(ii) Calculate **showing all your workings**, the difference between the running yield and the redemption yield of Gilt X using your answer from **part (a)(i)** above. **(3)**

(iii) Explain what can be identified about Gilt X from the information contained in **Table 1** and your answer from **part (a)(ii)** above. **(6)**

(b) **(i)** Identify the main benefits of owning a gilt-based collective fund in comparison to a single gilt on a direct basis. **(4)**

(ii) Identify the main drawbacks of owning a gilt-based collective fund in comparison to a single gilt on a direct basis. **(4)**

(iii) State the **three** types of credit risk that apply to owning direct gilts. **(3)**

(c) **(i)** Calculate, **showing all your workings**, the theoretical ex-rights price of the client's holding in Garden Finch, assuming that the client exercises their rights in full. **(7)**

(ii) State the **two** options available to the client other than taking up the rights issue in full. **(2)**

(d) List **four** main smart beta strategies that may be suitable based upon the client's objectives. **(4)**

Total marks available for this question: 40

NOTE ON MODEL ANSWERS
The model answers given are those which would achieve maximum marks. However, there are alternative answers to some question parts which would also gain high marks. For the sake of clarity and brevity not all of these alternative answers are shown. An oblique (/) indicates an equally acceptable alternative answer.

Model answer for Question 1

(a) (i) (3.3-0.2)
0.91 x (3.1)
0.2 + 2.821 = 3.021 = 3.02

(ii)
- Minimal/no default risk;
- Short duration/less than 3 months;
- minimal inflation and;
- interest rate sensitivity.

(iii) *Candidates would have scored full marks for any seven of the following:*
- Investors are rational and risk averse.
- Single/identical holding period.
- No individual can affect the market price.
- Ignores charges/tax.
- Market is liquid.
- Information is fully available to all investors.
- Risk-free rate/treasury bills are suitable to use.
- Investors can lend/borrow;
- unlimited amounts.
- Beta is correct measure of risk.

(b) (i) *Candidates would have scored full marks for any five of the following:*
- Weighted;
- average term/number of years;
- discounted/present value of;
- all cash flows/coupons + redemption value;
- from a bond.

(ii)
- Measures sensitivity of;
- a bond's price;
- yield to maturity/redemption yield/interest rates.

(iii) **Macaulay**
- Portfolio immunisation/liability matching/hedging out interest risk/predict returns.

Modified
- Reduce duration/interest rate risk.

(c) **(i)**
- Two;
- consecutive;
- quarters of;
- negative/declining/falling;
- GDP growth.

(ii) *Candidates would have scored full marks for any four of the following:*
- Fiscal surplus/reduction in gilt issuance.
- Monetary policy loosening.
- Reduction in inflation expectations.
- Quantitative easing (QE).
- Credit crisis/safe haven appeal/demand for sterling.

(iii)
- Increase duration.
- Decrease high yield.
- Increase investment grade/gilts/cash/short dated bonds.
- Use derivatives.

(d) **(i)** *Candidates would have scored full marks for any six of the following:*
- Minimum £500;
- Maximum £1 million.
- No minimum term/Instant access/no notice withdrawal/penalty.
- All/100% protected without upper limit.
- Backed by Government.
- Can use personal savings allowance/taxable but paid gross.
- Pay monthly/income must be paid out.

(ii)
- Provides diversification.
- Could invest more than £85,000/higher level of investor protection.
- No volatility/default/market/investment risk.

(iii)
- Maximum deposit £50,000.
- Interest rate notional/may not win any prize/erosion of money in real terms.

(e) **(i)**

$(-0.4 + 7.3)/2 = 3.45$

$(-0.4 – 3.45) + (7.3 - 3.45)$

$(-3.85)^2 + (3.85)^2$

$14.8225 + 14.8225$

$29.645/2 = \checkmark 14.8225 = 3.85$

(ii)
- Volatility/dispersion of returns;
- through variation in;
- actual return;
- against mean return.

(iii)
- 65-70% for 1SD.
- 94-98% for 2SD.

(f) **(i)** *Candidates would have scored full marks for any seven of the following:*

- Prices adjust/reflect/respond to;
- all;
- public information;
- rapidly and;
- unbiased.
- No excess return/cannot outperform market;
- Includes past prices and;
- company information.

(ii) *Candidates would have scored full marks for any two of the following:*

- Fundamental analysis ineffective;
- technical analysis ineffective.
- Neither adds outperformance.

(g) *Candidates would have scored full marks for any five of the following:*

- Cost.
- Potential tax liability.
- Impact/interruption to existing income.
- Attitude to risk/capacity for loss.
- Suitability of funds/asset allocation.
- Retention/change of benchmark.
- Time out of market.

Model answer for Question 2

(a)

- Marital status/dependents/children.
- State of health.
- Other assets.
- Liabilities.
- Provision of emergency fund.
- Ethical/socially responsible investments preferences.
- Capacity for loss.

(b) **(i)** 22,000 x 12.5p = £2,750
£2,750 - £2,000 = £750
£750 x 32.5% = £243.75
£2,750 - £243.75 = £2,506.25

(ii) *Candidates would have scored full marks for any eight of the following:*

- For investment of up to £200,000;
- 30%;
- Income Tax relief;
- up to Fenna's tax liability;
- if held for 5 years.
- Gains exempt from CGT/CGT-free;
- with no minimum period.
- No loss relief/deferral relief.
- Dividends tax-free.

(iii)

- Not covered at all by Financial Services Compensation scheme/£95,000/all capital at risk.
- May not receive full Income Tax relief/level of tax relief may exceed tax paid.

(iv) *Candidates would have scored full marks for any four of the following:*

- Accessibility/unable to sell underlying assets.
- Liquidity.
- Manager breaches qualifying rules.
- Manager risk/change in gains or income profile.
- May hold cash/not invest for a while.

(c) **(i)** **Onshore**

- Corporation Tax paid;
- on capital gains made/investment income;
- deemed UK basic rate tax/20% tax paid.
- Chargeable gains subject to 20%.
- Taxed as top part of income/after dividends.

Offshore

- Withholding tax;
- not subject to UK tax internally/gross roll-up.
- Subject to 40% on gains.
- Taxed as savings income.
- No chargeable event on death if on capital redemption basis.

(d)

- Strategic
- Investing for the long-term.
- Objectives known at outset/future target income.

Model answer for Question 3

(a) (i) £132.56 – £100 = £32.56
£32.56/12 = £2.713333333
(2.7133/132.56) x 100 = 2.0468718%
£1.45 x 2 = £2.9
(£2.9/£132.56) x 100 = 2.1876885%
(2.1876885% - 2.0468718%) = 0.14%

(ii) 2.19 - -0.14 = 2.05%

(iii)
- A medium.
- Trading above par.
- Capital loss;
- if held to redemption/maturity.
- Running yield lower than annual coupons/issue yield.
- Running yield higher than redemption yield.

(b) (i) *Candidates would have scored full marks for any four of the following:*
- Active management.
- Diversification;
- across yield curve/maturities/durations.
- Can invest in new gilts at issue.
- Access to market participants.

(ii) *Candidates would have scored full marks for any four of the following:*
- Exposed to duration risk/manager gets it wrong.
- Loss of known redemption date/yield/coupon.
- Investor protection limited to £85,000.
- Subject to CGT upon disposal.
- Daily dealing.
- Fund charges.

(iii)
- Default.
- Downgrade.
- Credit spread.

(c) (i) (9,500/5) x 2 = 3,800
3,800 x 71p = £2,698
£8,284 + £2,698 = £10,982
(£10,982/13,300) = 0.82571428 = 82.57p

(ii)
- Do nothing/ignore the issue.
- Sell the rights.

(d)
- Earnings growth.
- Dividend cover.
- Style (growth/value/momentum/quality/low volatility).
- Weighting.

All questions in the October 2021 paper will be based on English law and practice applicable in the tax year 2021/2022, unless stated otherwise and should be answered accordingly.

The Tax Tables which follow are applicable to the October 2020 and June 2021 examinations.

INCOME TAX

RATES OF TAX	2019/2020	2020/2021
Starting rate for savings*	0%	0%
Basic rate	20%	20%
Higher rate	40%	40%
Additional rate	45%	45%
Starting-rate limit	£5,000*	£5,000*
Threshold of taxable income above which higher rate applies	£37,500	£37,500
Threshold of taxable income above which additional rate applies	£150,000	£150,000
Child benefit charge:		
1% of benefit for every £100 of income over	£50,000	£50,000

*Only applicable to savings income that falls within the first £5,000 of income in excess of the personal allowance

Dividend Allowance	£2,000
Dividend tax rates	
Basic rate	7.5%
Higher rate	32.5%
Additional rate	38.1%
Trusts	
Standard rate band	£1,000
Rate applicable to trusts	
- dividends	38.1%
- other income	45%

MAIN PERSONAL ALLOWANCES AND RELIEFS

	2019/2020	2020/2021
Income limit for Personal Allowance §	£100,000	£100,000
Personal Allowance (basic) §	£12,500	£12,500
Married/civil partners (minimum) at 10% †	£3,450	£3,510
Married/civil partners at 10% †	£8,915	£9,075
Marriage Allowance	£1,250	£1,250
Income limit for Married Couple's Allowance†	£29,600	£30,200
Rent a Room scheme – tax free income allowance	£7,500	£7,500
Blind Person's Allowance	£2,450	£2,500
Enterprise Investment Scheme relief limit on £2,000,000 max**	30%	30%
Seed Enterprise Investment relief limit on £100,000 max	50%	50%
Venture Capital Trust relief limit on £200,000 max	30%	30%

§ the Personal Allowance reduces by £1 for every £2 of income above the income limit irrespective of age (under the income threshold).
† where at least one spouse/civil partner was born before 6 April 1935.
*** Investment above £1,000,000 must be in knowledge-intensive companies.*

	2019/2020	2020/2021
Child Tax Credit (CTC)		
- Child element per child (maximum)	£2,780	£2,830
- family element	£545	£545
Threshold for tapered withdrawal of CTC	£16,105	£16,385

NATIONAL INSURANCE CONTRIBUTIONS

Class 1 Employee	**Weekly**
Lower Earnings Limit (LEL)	£120
Primary threshold	£183
Upper Earnings Limit (UEL)	£962

Total earnings £ per week	**CLASS 1 EMPLOYEE CONTRIBUTIONS**
Up to 183.00*****	Nil
183.00 – 962.00	12%
Above 962.00	2%

**This is the primary threshold below which no NI contributions are payable. However, the lower earnings limit is £120 per week. This £120 to £183 band is a zero-rate band introduced in order to protect lower earners' rights to contributory State benefits e.g. the new State Pension.*

Total earnings £ per week	**CLASS 1 EMPLOYER CONTRIBUTIONS**
Below 169.00**	Nil
169.00 – 962.00	13.8%
Excess over 962.00	13.8%

*** Secondary earnings threshold.*

Class 2 (self-employed)	Flat rate per week £3.05 where profits exceed £6,475 per annum.
Class 3 (voluntary)	Flat rate per week £15.30.
Class 4 (self-employed)	9% on profits between £9,500 - £50,000. 2% on profits above £50,000.

PENSIONS

TAX YEAR	LIFETIME ALLOWANCE
2006/2007	£1,500,000
2007/2008	£1,600,000
2008/2009	£1,650,000
2009/2010	£1,750,000
2010/2011	£1,800,000
2011/2012	£1,800,000
2012/2013	£1,500,000
2013/2014	£1,500,000
2014/2015	£1,250,000
2015/2016	£1,250,000
2016/2017	£1,000,000
2017/2018	£1,000,000
2018/2019	£1,030,000
2019/2020	£1,055,000
2020/2021	£1,073,100

LIFETIME ALLOWANCE CHARGE

55% of excess over lifetime allowance if taken as a lump sum.
25% of excess over lifetime allowance if taken in the form of income.

ANNUAL ALLOWANCE

TAX YEAR	ANNUAL ALLOWANCE
2015/2016	£40,000~
2016/2017	£40,000*
2017/2018	£40,000*
2018/2019	£40,000*
2019/2020	£40,000*
2020/2021	£40,000*

~ increased to £80,000 for pension input between April - 8 July 2015. If not used, can be carried forward to pension input period of 9 July 2015 - 6 April 2016, subject to a maximum of £40,000.

**tapered by £1 for every £2 of 'adjusted income' over £240,000 to a minimum of £4,000 if 'threshold income' is also over £200,000.*

MONEY PURCHASE ANNUAL ALLOWANCE	2019/2020	2020/2021
	£4,000	£4,000

ANNUAL ALLOWANCE CHARGE

20% - 45% determined by the member's taxable income and the amount of total pension input in excess of the annual allowance or money purchase annual allowance.

CAPITAL GAINS TAX

EXEMPTIONS	2019/2020	2020/2021
Individuals, estates etc	£12,000	£12,300
Trusts generally	£6,000	£6,150
Chattels proceeds (restricted to five thirds of proceeds exceeding limit)	£6,000	£6,000

TAX RATES		
Individuals:		
Up to basic rate limit	10%	10%
Above basic rate limit	20%	20%
Surcharge for residential property and carried interest	8%	8%
Trustees and Personal Representatives	20%	20%
	10%	10%
Business Asset Disposal Relief* – Gains taxed at:		
Lifetime limit	£10,000,000	£1,000,000

**For trading businesses and companies (minimum 5% employee or director shareholding) if held for at least two years.*

INHERITANCE TAX

RATES OF TAX ON TRANSFERS	2019/2020	2020/2021
Transfers made on death		
- Up to £325,000	Nil	Nil
- Excess over £325,000	40%	40%
Transfers		
- Lifetime transfers to and from certain trusts	20%	20%

A lower rate of 36% applies where at least 10% of deceased's net estate is left to a registered charity.

MAIN EXEMPTIONS		
Transfers to		
- UK-domiciled spouse/civil partner	No limit	No limit
- non-UK-domiciled spouse/civil partner (from UK-domiciled spouse)	£325,000	£325,000
- main residence nil rate band*	£150,000	£175,000
- UK-registered charities	No limit	No limit

**Available for estates up to £2,000,000 and then tapered at the rate of £1 for every £2 in excess until fully extinguished.*

Lifetime transfers		
- Annual exemption per donor	£3,000	£3,000
- Small gifts exemption	£250	£250
Wedding/civil partnership gifts by		
- parent	£5,000	£5,000
- grandparent/bride and/or groom	£2,500	£2,500
- other person	£1,000	£1,000

100% relief: businesses, unlisted/AIM companies, certain farmland/building
50% relief: certain other business assets

Reduced tax charge on gifts within 7 years of death:					
- Years before death	0-3	3-4	4-5	5-6	6-7
- Inheritance Tax payable	100%	80%	60%	40%	20%

Quick succession relief:					
- Years since IHT paid	0-1	1-2	2-3	3-4	4-5
- Inheritance Tax relief	100%	80%	60%	40%	20%

PRIVATE VEHICLES USED FOR WORK

	2019/2020 Rates	2020/2021 Rates
Cars		
On the first 10,000 business miles in tax year	45p per mile	45p per mile
Each business mile above 10,000 business miles	25p per mile	25p per mile
Motor Cycles	24p per mile	24p per mile
Bicycles	20p per mile	20p per mile

MAIN CAPITAL AND OTHER ALLOWANCES

	2019/2020	2020/2021
Plant & machinery (excluding cars) 100% annual investment allowance (first year)	£1,000,000	£1,000,000
Plant & machinery (reducing balance) per annum	18%	18%
Patent rights & know-how (reducing balance) per annum	25%	25%
Certain long-life assets, integral features of buildings (reducing balance) per annum	6%	6%
Energy & water-efficient equipment	100%	100%
Zero emission goods vehicles (new)	100%	100%
Electric charging points	100%	100%
Qualifying flat conversions, business premises & renovations	100%	100%

Motor cars: Expenditure on or after 01 April 2016 (Corporation Tax) or 06 April 2016 (Income Tax)

CO_2 emissions of g/km:	50 or less*	51-110	111 or more
Capital allowance:	100% first year	18% reducing balance	6% reducing balance

**If new*

MAIN SOCIAL SECURITY BENEFITS

		2019/2020	2020/2021
		£	£
Child Benefit	First child	20.70	21.05
	Subsequent children	13.70	13.95
	Guardian's allowance	17.20	17.90
Employment and Support Allowance	Assessment Phase		
	Age 16 - 24	Up to 57.90	Up to £58.90
	Aged 25 or over	Up to 73.10	Up to £74.35
	Main Phase		
	Work Related Activity Group	Up to 102.15	Up to 74.35
	Support Group	Up to 111.65	Up to 113.55
Attendance Allowance	Lower rate	58.70	59.70
	Higher rate	87.65	89.15
Basic State Pension	Single	129.20	134.25
	Married	201.45	268.50
Single Tier State Pension	Single	168.60	175.20
Pension Credit	Single person standard minimum guarantee	167.25	173.75
	Married couple standard minimum guarantee	255.25	265.20
	Maximum savings ignored in calculating income	10,000.00	10,000.00
Bereavement Support Payment	Higher rate – First payment	3,500.00	3,500.00
	Higher rate – monthly payment	350.00	350.00
	Lower rate – First payment	2,500.00	2,500.00
	Lower rate – monthly payment	100.00	100.00
Jobseeker's Allowance	Age 18 - 24	57.90	58.90
	Age 25 or over	73.10	74.35
Statutory Maternity, Paternity and Adoption Pay		148.68	151.20

CORPORATION TAX

	2019/2020	2020/2021
Standard rate	19%	19%

VALUE ADDED TAX

	2019/2020	2020/2021
Standard rate	20%	20%
Annual registration threshold	£85,000	£85,000
Deregistration threshold	£83,000	£83,000

STAMP DUTY LAND TAX

	Residential
Value up to £125,000	0%
£125,001 - £250,000	2%
£250,001 and £925,000	5%
£925,001 and £1,500,000	10%
£1,500,001 and over	12%

Important note: For residential properties purchased between 8th July 2020 and 31st March 2021, Stamp Duty Land Tax does not apply up to £500,000. For purchases above £500,000, the band rates above apply as normal. Additional SDLT rules still apply as below.

Stamp Duty Land Tax (SDLT) is payable in England and Northern Ireland only. Land Transaction Tax (LTT) is payable in Wales and Land and Buildings Transaction Tax (LBTT) is payable in Scotland. The rates for LTT and LBTT are different to the rates shown above.

Additional SDLT of 3% may apply to the purchase of additional residential properties purchased for £40,000 or greater.

SDLT may be charged at 15% on interests in residential dwellings costing more than £500,000 purchased by certain corporate bodies or non-natural persons.

First-time buyers benefit from SDLT relief on purchases up to £500,000 when purchasing their main residence. On purchases up to £300,000, no SDLT is payable. On purchases between £300,000 and £500,000, a flat rate of 5% is charged on the balance above £300,000.

	Non residential
Value up to £150,000	0%
£150,001 and £250,000	2%
£250,001 and over	5%