Chartered Insurance Institute

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment Planning

October 2017 Examination Guide

SPECIAL NOTICES

Candidates entered for the April 2018 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 or from Customer Service. 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 purchase copies of the most recent Examination Guides online at www.cii.co.uk. CII members can download free copies of older Examination Guides online at www.cii.co.uk/knowledge.

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 question 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 better in this examination than in the previous sitting which was notable for having a significant number who were not well prepared for an advanced level examination. However, whilst the majority of candidates had sufficient knowledge to attempt all questions, many still fell short of developing their answers fully enough to score high marks.

The better prepared candidates not only developed their answers to a sufficient depth but also addressed the specific question being asked and, where applicable, related back to the details within the case study.

This paper tested a small number of very important and well publicised recent issues in the investment world and it was these questions that candidates tended to struggle on which was disappointing. Whilst AF4 will continue to test its traditional core areas, candidates for an advanced diploma examination should be able to demonstrate a good level of knowledge of key current events beyond that given in the study text.

For example, following the Brexit referendum result there was significant volatility in the price of Real Estate Investment Trusts and many property open-ended investment companies (OEICs) changed their basis of pricing or suspended redemptions. In light of this the role of OEICs as property investment vehicles was extensively debated in the industry press. However, many candidates only had superficial understanding of the issues or seemed unaware of them at all.

In the months leading up to the examination, Venture Capital Trust new issues were seeking to raise over £500 million which was a very significant increase in activity compared to the previous years. This was partly due to the lack of new issues following the rule changes in November 2015 and also increased demand from investors caught by pension annual allowance changes seeking alternative tax efficient investments. However, few candidates understood these changes in detail and many seemed unaware of them at all.

Similarly, the question on Lifetime ISAs was poorly answered. Many candidates did not know the main features, in particular how the government bonus is added or the well-publicised issues surrounding the penalty for early withdrawal.

Finally, as this guide was completed in March 2018, stock markets are seeing significant one day falls that are being blamed on expectations for inflation and future interest rates. Whilst interest rate policy and economic factors was only touched on in this sitting, we would advise future candidates to read the monthly minutes of the Bank of England policy committee which are published online. This short report gives a concise view of the current thinking in this area and is designed to be read by a lay person. Those with more time and interest in developing expertise in this area could also read the quarterly inflation reports.

Question 1

Part (a) tested knowledge of Central Bank policies and was a topical question, as it tested the position the Bank of England found itself at the time of the examination. The majority of candidates were able to gain at least two marks here. Some simply listed the consequences of raising rates rather than answering the specific question asked, and so missed key points such as inflation may be temporary, or the Central Bank had concerns around future economic uncertainty caused by events such as Brexit.

I would advise future candidates to read the monthly minutes of the Bank of England monetary policy committee which are published online.

Part (b) tested knowledge of the risks of hedge funds, an understanding of performance fees and how these would compare to a portfolio of exchange traded funds (ETFs).

Part (b)(i) was answered well and most candidates achieved the correct answer and showed each step of the working out. Where candidates missed marks, it was either down to not showing all the stages of their calculations or not following instructions and calculating the annual management charge before deduction of the performance fee.

Part (b)(ii) was also answered well and most candidates identified some of the drawbacks of hedge funds in general, such as liquidity and transparency and also related their answer back to the specific hedge fund in the case study, which had high charges, a high minimum level of investment, potentially less regulation due to its jurisdiction and an investment strategy based on a prediction that may not turn out to be correct.

Part (b)(iii) tested the features of ETFs was answered less well even by those who scored highly on part (b)(ii). Candidates could have scored most of the marks available by simply reversing the drawbacks of a hedge fund. Instead many focused solely on the investment strategy.

In part (c) most candidates were able to calculate the information ratio correctly in part (c)(i) and then correctly explain what it measures, although fewer did well on its limitations.

In part (c)(ii) most candidates were able to identify why the ratios of the funds differed. Although few candidates explained the key underlying point that the Momentum ETF intended to deviate from its benchmark via its strategy of weighting stocks by momentum factors, rather than market capitalisation and hence would be expected to have a high tracking error and this was what provided its outperformance and information ratio difference.

Part (d) was not well answered. Candidates generally identified that the tracking error could occur due to charges and different methods of tracking being used (for example full replication versus sampling) but spent far too much time explaining the different tracking methods which the question did not ask them to do and left little time to explore the other potential causes of tracking error such as dividend reinvestment lag or securities lending.

In part (e)(i) the majority of candidates scored full marks on this straight forward calculation.

In part (e)(ii) almost all of the candidates understood that a benchmark is there to measure relative performance, but often did not expand this further, to explain it can be a tool to set asset allocation and manage risk.

In part (e)(iii) most candidates generally scored well here, covering key points such as the benefits of diversification and the fact that returns are generally not correlated to equities. Candidates who scored maximum marks were able to explain theories such as the efficient frontier or the fact that whilst the performance of bonds had been poor in the past this was not necessarily a guide to future performance.

In part (e)(iv) most candidates were aware of the flaws of the capital asset pricing model (CAPM) and stated a number of the assumptions underpinning the model which may not be true in reality. Few candidates identified the more important issues such as the fact the model only uses beta as a way of predicting returns and in practice has performed poorly.

A large number of candidates demonstrated that they did not understand what momentum or size factors actually meant and therefore struggled with the second part of the question which needed an explanation of why these have been identified as anomalies not explained by the model. Some candidates mentioned the names of Fama and French, however, it was clear that few have studied and understood their work, which has ultimately led to the award of a Nobel prize.

Part (f) covered the changes to Venture Capital Trust (VCT) rules and the winding up of a close-ended investment fund and was not well answered.

In part (f)(i) many candidates correctly calculated the percentage discount to net asset value and showed all their working out. However, some candidates gave the answer in £ instead of % as the question had asked. In addition, a few candidates incorrectly used the offer price instead of bid price in the calculation not understanding that a share is sold at the lower of the two prices.

In part (f)(ii) candidates struggled on this more technical question, with many candidates clearly not aware of the changes in VCT legislation announced in the 2015 budget.

In part (f)(iii) most candidates explained a potential advantage that Peter will get a higher return, if the net asset value is achieved on wind up and that the discount would close over the period if the expected prices are achieved for the underlying assets. Similarly, as a disadvantage, nearly all of the candidates pointed out that this was not guaranteed, and the share price could fall further.

Few candidates developed their answers beyond these points to assess the factors behind whether successful sales were likely to be achieved and advantages such as avoiding the costs of selling and being exposed to more mature, lower risk companies benefiting from the previous VCT rules.

Question 2

Part (a) analysing the performance of a firm of architects was generally well answered, although few candidates scored full marks for identifying all the potential underlying issues.

In parts (a)(i) and (ii) most candidates performed the two calculations correctly. There were several candidates who made errors in the revenue per employee calculation by not using the correct units of measurement and so obtaining an answer that was out by a factor of up to a thousand for example £96 rather than £96,000. It is always useful to check answers for reasonableness and here clearly a company could not survive if each employee only contributed £96 to annual revenues.

In part (a)(iii), whilst most candidates identified that the ratios demonstrated efficiency or productivity, better prepared candidates explained that this is a service company and so staff are the major cost as well as revenue generators.

In part (a)(iv) almost all candidates correctly recognised the direction of the trends in both revenue and operating profit margin. Only candidates who developed their answer to identify that that the profits have been increasing at a faster rate than revenue showing greater control of costs, scored higher marks.

In part (a)(v) most candidates generally performed well, with a fair number of maximum marks achieved.

Part (b)(i) despite being tested in a recent examination, generally candidates struggled to explain what is meant by quality of earnings with the majority of candidates only being able to identify consistency of profits. This is a significant factor in the analysis of equities and should be better understood.

In part (b)(ii) most candidates were able to recognise the trend and magnitude of the figures in the accounts that the question asked for comments on. However, some candidates did not dig deeper and explain important points such as the fact that goodwill is subjective, and in this case determined by the price the company has chosen to pay in the takeovers or that the pension deficit could increase due to factors outside of the company's control.

In parts (c)(i) and (ii) most candidates calculated the dividend yield and earnings per share correctly. Again, there were some noticeable errors with units in the second calculation where answers were shown as 0.25p rather than the correct 25p.

In part (c)(iii) most candidates correctly explained that the company may set the dividend at a low rate to retain money within the company for reinvestment into the business or expansion with the candidates that scored higher marks also explaining that the company may wish to simply improve its balance sheet/reserves in case of a downturn in business.

In part (c)(iv) candidates performed less well and many mentioned rights issues which would not actually result in returning money to investors.

Question 3

In part (a)(i) overall candidates scored well, although it was noted that some candidates neglected the focus of the question and gave other factors which did not relate to the underlying property investments such as fund charges.

In part (b) the focus on this question was around the risk on disposal as a result of the difference in structure of a Real Estate Investment Trust (REIT) and an open-ended investment company (one being close-ended and the other open-ended). A number of candidates instead only explained the tax implications on disposal. Given the issues with property funds post the EU referendum, I would have expected to see more candidates covering important points such as fair market adjustors and fund suspensions in the case of an open-ended investment company (OEIC) investing in property.

Part (c) was answered well. It was pleasing to see that when looking at the potential to protect against inflation, candidates tended to look at both the income and capital components of the two asset classes.

Part (d) tested Lifetime ISAs and knowledge was lower than would have been expected.

In part (d)(i) a number of candidates scored full marks on this question and most demonstrated a reasonable understanding of the features of lifetime ISAs. However, some candidates did not answer the specific question about why the Lifetime ISA was suitable for this particular client.

In part (d)(ii) most candidates were able to work out the monthly compounding, which was pleasing as this is an area that has been tested regularly, and candidates in the past have struggled. Many candidates, however, either forgot to add the bonus or added it at the wrong stage of the calculation (under the rules in place at the time of the examination it was paid at the end of the tax year).

In part (d)(iii) candidates tended to score less well, calculating the loss Judith would suffer should she withdraw her fund after a year to buy a car.

Many candidates were not aware that the penalty was 25% of the amount withdrawn which tends to mean that in practice any growth, the government bonus and some of the initial capital is lost. This penalty has been extensively debated in the industry press.

In addition, many candidates did not answer the specific question being asked and either only calculated the penalty applied or less frequently the amount received back, but not the loss Judith would suffer out of her £3,000 which is what the question had asked for.

THE CHARTERED INSURANCE INSTITUTE

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment planning

October 2017 examination

SPECIAL NOTICES

All questions in this paper are based on English law and practice applicable in the tax year 2017/2018, 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), and (f) which follow.

Peter is a sophisticated investor who earns a salary of £225,000 and has £300,000 that he wishes to invest now. Outside of his pension, Peter has an investment portfolio of approximately £500,000 invested mainly in equities. Of this £200,000 is in stocks and shares ISAs. He has used his ISA allowance for the current tax year 2017/2018 and will make the maximum pension contributions up to his annual allowance.

Peter is considering investing in a multi-strategy macro hedge fund registered in the Cayman Islands. One of the fund's strategies is based on the manager's prediction that inflation in the UK will increase significantly and the Bank of England will raise interest rates.

There is a minimum investment of £250,000 and no initial charges. An annual management charge of 2% is applied and a performance fee of 20% on the excess return above 5%.

As an alternative, you have recommended he invests in a low-cost investment portfolio using passive exchange traded funds (ETFs) with a global remit. You have chosen the following ETFs basing your decision on a multi-factor model using value, size and momentum factors.

ETF	Allocation %	AMC %	Annualised 5 Year Return %	Benchmark Return %	Annualised Standard Deviation %	Information ratio	Tracking error %
Global Equities	50	0.1	7.3	7.5	16.5	-0.25	0.8
Global Government Bonds	20	0.1	-2.6	-2.5	6.0		0.5
Global Momentum	10	0.3	10.3	7.5	15.6		3.5
Global Value	10	0.3	8.2	7.5	17.0		3.0
Global Size	10	0.2	7.8	7.5	18.0		2.5

Peter subscribed £20,000 at the launch of a Venture Capital Trust (VCT) called BMO Capital 8 years ago when the shares were priced at 100p. BMO Capital specialised in providing funding for management buy-outs. They have just announced that they will be winding the company up and selling their remaining investments over the next year.

Peter is considering selling his shares immediately and investing the proceeds in a newly launched VCT that is aiming to raise £20 million to provide funding to small technology companies.

	Shares in issue (million)	**Net assets £ million**	**Bid Price**	**Offer Price**
BMO VCT	20.5	19.5	76p	82p

Questions

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

(a) Explain why the Bank of England may **not** raise interest rates even if inflation increases significantly and exceeds their target. **(4)**

(b) **(i)** If the hedge fund produces an investment return of 12% in the first year of ownership, calculate **showing all your workings**, how much Peter's fund would be worth (in £) after charges at the end of the year. *Assume Peter invests £250,000, all fees and charges are applied at the end of the year and the performance fee is deducted **before** the annual management charge.* **(7)**

(ii) State **six** possible drawbacks should Peter decide to invest in the hedge fund, ignoring investment performance. **(6)**

(iii) Explain why you have recommended the portfolio of ETFs to Peter rather than the hedge fund. **(5)**

(c) **(i)** Calculate, **showing all your workings**, the information ratio for the Global Momentum ETF. **(4)**

(ii) Explain to Peter what the information ratio measures and its limitations if used in isolation. **(6)**

(iii) Explain why the information ratio of the Global Momentum ETF and the Global Equities ETF differ, despite using the same benchmark. **(3)**

(d) Explain briefly the potential causes of an ETF tracking error. **(7)**

(e) **(i)** Calculate, **showing all your workings**, the annualised 5 year return of the ETF portfolio. **(6)**

(ii) Explain briefly the purpose of using a benchmark in the investment process. **(4)**

(iii) Peter is concerned that the global government bond fund has lost money over the past five years.

Explain why you have recommended it is included within the portfolio. **(4)**

(iv) State the main criticisms of the Capital Asset Pricing Model (CAPM) and explain why each of the **three** factors chosen are included in multi-factor models:

- momentum;
- size;
- value. **(7)**

(f) **(i)** Calculate, **showing all your workings**, the discount (%) to net asset value that the BMO Capital shares are trading at, were Peter to sell his shares today. *Ignore dealing costs in your answer*. **(5)**

(ii) Explain to Peter the changes in VCT legislation announced in the 2015 budget that became effective in November 2015 and how these have affected BMO Capital VCT. **(4)**

(iii) Explain to Peter **four a**dvantages and **four** disadvantages of retaining his existing shares in BMO Capital during the winding up period, rather than selling them now and investing in the new VCT launch. **(8)**

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 clients circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b) and (c) which follow.

Michael owns shares in a firm of architects, Big Draw plc. He is aware that one of their competitors, Sky High, is expanding rapidly and has recently bought two smaller rivals. Michael is considering whether to sell his shares in Big Draw and invest in Sky High instead.

A friend who is an accountant has commented that he has concerns about the quality of earnings of Sky High.

Whilst the two firms have a similar number of employees and annual revenues, he has pointed out to Michael, that following the two takeovers completed by Sky High in 2015 and 2016, there are several exceptional items in the accounts. He has also highlighted that the goodwill, borrowing and the pension deficit shown in the accounts may be cause for concern.

Big Draw	**2016 £ million**	**2015 £ million**	**2014 £ million**
Revenue	1,230	1,125	1,030
Staff costs	(765)	(701)	(650)
Other costs	(340)	(335)	(310)
Other costs – exceptional items	(0)	(0)	(0)
Operating profit	125	89	70
Interest Payable	0	0	0
Taxation	(25)	(20)	(15)
Profit for the year	100	79	55
Non-current assets			
Property, plant and equipment	129	129	131
Goodwill/intangible assets	3	3	2.5
Current assets			
Trade and other receivables	381	342	297
Cash	137	129	105
Current liabilities			
Trade and other payables	(428)	(380)	(316)
Long term liabilities			
Borrowings	(0)	(0)	(0)
Final Salary Pension liabilities	(0)	(0)	(0)
Number of employees	12,806	12,143	11,320
Share price	410p	356p	310p
Dividend per share	4p	4p	4p
Number of shares in issue	400 million	400 million	400 million

Sky High	2016 £ million	2015 £ million	2014 £ million
Other costs – exceptional items	(250)	(350)	(250)
Goodwill/intangible assets	800	450	250
Long term liabilities			
Borrowings	(1,100)	(900)	(700)
Final Salary Pension liabilities	(1,300)	(1,200)	(950)

Questions

(a) **(i)** Calculate, **showing all your workings**, the operating profit margin for Big Draw in 2016. **(3)**

(ii) Calculate, **showing all your workings**, the revenue per employee for Big Draw in 2016. **(3)**

(iii) Explain briefly why the revenue per employee is important for the analysis of Big Draw. **(4)**

(iv) Comment on the trend for operating profit margin and revenue of Big Draw. **(4)**

(v) State **two** other measures in relation to employees that you would look at to assess quality of management. (*No calculation required*). **(2)**

(b) **(i)** Explain what is meant by quality of earnings. **(4)**

(ii) Comment on each of the **four** areas in the accounts of Sky High identified by the accountant (exceptional items, goodwill, borrowings and pension deficit) and explain why they might persuade Michael **not** to buy shares in Sky High. **(8)**

(c) **(i)** Calculate, **showing all your workings**, the dividend yield for Big Draw in 2016. **(3)**

(ii) Calculate, **showing all your workings**, the earnings per share **in pence** for Big Draw in 2016. **(3)**

(iii) Explain why Big Draw may have chosen to set the annual dividend at the level it has. **(3)**

(iv) State **three** ways a company can return money to investors, other than the annual dividend payment. **(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 clients circumstances as set out in the case study. Please carry out ALL of the tasks (a), (b), (c) and (d) which follow.

Jim, who is recently retired, has been assessed as having a balanced attitude to risk and wishes to invest over the longer term. He currently relies on a portfolio of fixed interest bonds to supplement his retirement income. He would like to consider investing into another asset class, and has asked you to consider whether commercial property investment might be appropriate for him and also to explain potential drawbacks.

His daughter, Judith, aged 20 is hoping to buy her first home in five or six years' time. She has read that an ISA would be an effective way of saving towards this property purchase. Judith has a relatively adventurous risk profile and has asked you to explain which ISA scheme might be most suitable for her to consider. She can afford to invest £3,000 per year.

Questions

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

(a) Identify **seven** factors in relation to the underlying investments that determine the return on a commercial property fund. **(7)**

(b) Jim has asked you specifically about real estate investment trusts (REITs) and open-ended investment companies (OEICs) as property investment vehicles.

Explain to Jim the risks he should consider **on disposal** of a:

(i) REIT: **(3)**

(ii) OEIC investing in property. **(6)**

(c) Explain to Jim why an investment into property may protect him in a climate of rising inflation in comparison to a portfolio consisting wholly of fixed interest bonds. **(7)**

(d) **(i)** List **five** reasons why a Lifetime ISA may be appropriate for Judith's circumstances and **two** potential drawbacks. **(7)**

(ii) If Judith contributed a single payment of £3,000 to a one year 2% fixed rate Lifetime ISA paying interest monthly on a compounding basis, and made no further contributions, calculate, **showing all your workings**, what it would be worth at the end of the first year. **(6)**

(iii) Calculate, **showing all your workings**, the loss Judith would suffer out of her £3,000 investment if she decided to withdraw the funds from the Lifetime ISA after the first full year in order to purchase a car. **(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) *Candidates would have gained full marks for any four of the following:*
- Deemed to be temporary/factors causing inflation will fall out of the annual calculation and it will return to target of its own accord.
- Future economic uncertainty e.g. BREXIT/to ensure economic stability.
- High levels of corporate and personal debt/risk to debtors.
- Exchange rate concerns and the effect on trade.
- Increasing interest rates may not impact on some types of inflation (e.g. caused by rising commodity prices).

(b) **(i)**
- Return in excess of hurdle 12% - 5% = 7%
- Performance fee 7% x 20% = 1.4%
- Total return after performance fee = 12% - 1.4% = 10.6%
- Return after annual fee = 1.106 x 0.98 = 1.08388
- £250,000 x 1.08388 = 270,970

(ii)
- May be illiquid;
- strategy not transparent/limited information on how strategy will be achieved
- High minimum investment/high proportion of new investment in one fund.
- High charges/performance fees.
- Fund manager's strategy might not work.
- Less regulation or investor protection/no Financial Services Compensation Scheme (FSCS).

(iii) *Candidates would have gained full marks for any five of the following:*
- Traded throughout the day/better liquidity.
- Underlying assets transparent/easier to benchmark performance
- Low minimum investment.
- Low charges/no performance fee.
- Passive funds not relying on a manager strategy/methodology.
- Regulated by the Financial Conduct Authority (FCA)/consumer protection.

(c) **(i)**
- Information ratio = (Portfolio return – Benchmark return)/Tracking error.
- = (10.3 – 7.5)/3.5
- = 2.8/3.5
- = 0.8

(c) **(ii)** *Candidates would have gained full marks for any six of the following:*

- Relative performance.
- Compared to benchmark.
- Adjusted for risk.

- Historical/no guide to future.
- Need to compare to similar funds.
- Need to look at trends/different time periods.
- Need to consider other factors/not give full picture.

(iii)

- Larger/different tracking error.
- Can outperform/different performance.
- Different portfolio construction/weighting/strategy.

(d) *Candidates would have gained full marks for any seven of the following:*

- Inaccuracy of tracking/method used (i.e. sampling).
- Management fee.
- Other expenses/costs.
- Currency hedging.
- Cash drag/uninvested cash.
- Dividend reinvestment lag.
- Tax/withholding tax.
- Securities lending.

(e) **(i)**

- 0.5 x 7.3% = 3.65%
- 0.2 x -2.6% = 0.52%
- 0.1 x 10.3% = 1.03%
- 0.1 x 8.2% = 0.82%
- 0.1 x 7.8% = 0.78%
- Total 5.76%

(ii)

- Sets asset allocation/starting point.
- Independent/neutral agreed basis.
- To manage risk expectations.
- To measure relative performance to benchmark/value added or performance by the fund manager.

(iii) *Candidates would have gained full marks for any four of the following:*

- Diversification.
- Negatively/non-correlated to other funds/may produce positive returns if equities fall.
- Lower volatility.
- Better expected risk adjusted returns on overall portfolio/efficient frontier.
- Historical performance no guide to future performance.

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

Unrealistic assumptions:

- Assumes can borrow unlimited funds at risk free rate.
- Assumes no taxes/charges.
- Assumes investors' are rational and risk adverse.
- Assumes market is efficient/all information available to everybody.
- Single factor model/only uses beta.
- Based on historical data.
- Difficult to identify risk free rate of return.
- Not a good predictor in practice/doesn't work in the real world/inaccurate.

- **Momentum**: Shares of companies that have increased in price over the past 6-12 months tend to continue to outperform and this is not explained by Capital Asset Pricing Model (CAPM).
- **Value**: Undervalued company shares measured by price to book and similar ratios tend to outperform.
- **Size**: Smaller company shares tend to outperform larger companies.

(f) **(i)**

- Net asset value per share = £19.5 million / £20.5 million = 95.12p
- [1 – (76p / 95.12p) x 100
- (1 – 0.799) x 100 = 20.13% discount

(ii) *Candidates would have gained full marks for any four of the following:*

- BMO can no longer invest in management buy-outs (MBOs)/use funds to acquire businesses.
- Would need to invest in less mature companies/ maximum age generally seven years.
- Would need to invest in smaller companies/total amount of risk finance investments a company may receive or benefit from in its lifetime is limited to £12 million.
- Different investment approach/skills required.
- Have chosen to wind up instead.

(iii) Advantages:

- Discount to net asset value will close if net asset value is achieved.
- Expected to see return of money within one year/do not have to tie up money for further five years.
- May be less risky/invested under the previous rules/companies are established with track record.
- Avoids costs of selling existing shares and buying costs of new Venture Capital Trust (VCT)/time out of market.

Disadvantages:

- No further tax relief available/new VCT investment will receive 30% tax relief
- Liquidity issues/may not be able to sell underlying investments within timescale proposed;
- May not achieve price expected/Net asset value not achieved.
- Bid offer could widen/share price could fall further.

Model answer for Question 2

(a) (i)

- = £125 million/£1,230 million
- = 10.16%

(ii)

- = £1,230 million/£12,806
- = £96,048

(iii)

- Architect firm is a service industry.
- Staff are the main expense/main profit generators.
- Measures efficiency/productivity.
- Shows quality of management/motivation.

(iv)

- Revenue is increasing.
- Profit margin is increasing.
- at a higher/faster rate than revenue.
- Indicating greater control of costs/more efficient.

(v) *Candidates would have gained full marks for any two of the following:*

- Staff turnover.
- Absenteeism.
- Profit per employee.

(b) (i)

- Accurately represents trading performance of business.
- Not manipulated by accounting policies/no one off items.
- Strong free cashflow/cash generation.
- Performance repeatable/consistent/dependable/sustainable.

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

Goodwill:

- Has increased.
- Is determined by management/can be subjective.
- May have overpaid for takeovers/value may not transfer to new owners.

Pension liability:

- Has increased.
- Deficit due to factors outside their control and may increase further (for example increasing longevity or low annuity rates).
- Need to fund deficit out of current profits/put in place a deficit recovery plan/increase current contributions.

Borrowing:

- Has increased.
- Interest rates could rise.
- Need to fund increased interest payments from profits.

Exceptional items:

- Appearing each year.
- Open to manipulation/could hide ongoing problems.

(c) (i)

- = 4/410
- = 0.98%

(ii)

- £100 million/£400 million.
- =£0.25 or 25p per share

(iii)

- Increasing reserves/contingency/strengthen balance sheet.
- Reinvesting earnings in business/fund takeovers.
- Set at sustainable level.

(iv) *Candidates would have gained full marks for any three of the following:*

- Special dividends.
- Share buy backs via the market.
- Tender issue to repurchase shares.
- Wind up/sell company.

Model answer for Question 3

(a) *Candidates would have gained full marks for any seven of the following:*

- Location/geographical spread.
- Type of holdings/sector (office, retail, industrial).
- Size of properties/liquidity.
- Rental yield.
- Tenant quality.
- Length of lease.
- Basis of rent/lease reviews.
- Void/occupancy rate.
- Development opportunities.

(b) **(i)**

- REIT subject to supply and demand/closed-ended fund;
- in a weak market may be heavily discounted/trade at discount to net asset value;
- in extreme conditions or with smaller trusts there may be no buyers/stock could become illiquid.

(ii)

- Managers may not have sufficient cash to pay sellers.
- Managers may not be able to sell property/forced to sell property below market price/ cheaply;
- which would be to disadvantage of remaining shareholders/need to protect remaining shareholders;
- Move to weekly valuations.
- Apply fair value pricing.
- Apply dilution levy.
- Apply fund dealing suspension.

(c)

- Current market value of bonds falls as inflation rises.
- Maturity value eroded by inflation at redemption.
- Real value of income eroded by inflation;
- as both are fixed.
- Diversification/not correlated.
- Property is a real asset/capital increases with inflation.
- Rental income revalued upwards with inflation.

(d) **(i)** *Candidates would have gained full marks for any five of the following:*

- Her contribution of £3,000 is within limit of £4,000.
- She is under 40 meeting the maximum age criteria.
- Equity version meets attitude to risk.
- She intends to purchase her first home;
- so she will be able to access early without penalty;
- and be able to receive government bonus.

Drawbacks:

- 25% penalty on withdrawals.
- Can only access to buy a house without penalty;

(d) **(ii)**

- Start of Year: £3,000
- Interest 2%/12 = 0.001666% monthly
- $1.001666^{12} = 1.02018354$
- £3,000 x 1.02018354 = £3,060.55
- Bonus £3,000 x 25% = £750 added at the end of the tax year
- Total: £3,810.55

(iii)

- (£3,810.55 - 25%) = £952.6375 penalty for withdrawal
- £3,810.55 – £952.64 = £2,857.91 remaining after penalty
- £3,000 – £2,857.91 = £142.09 loss on original investment

All questions in the April 2018 paper will be based on English law and practice applicable in the tax year 2017/2018, unless stated otherwise and should be answered accordingly.

The Tax Tables which follow are applicable to the April 2018 examinations.

INCOME TAX

RATES OF TAX	2016/2017	2017/2018
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	£32,000	£33,500
Threshold of taxable income above which additional rate applies	£150,000	£150,000
Child benefit charge from 7 January 2013:		
1% of benefit for every £100 of income over	£50,000	£50,000

**not applicable if taxable non-savings income exceeds the starting rate band.*

Dividend Allowance		£5,000
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		
Income limit for Personal Allowance *§*	£100,000	£100,000
Personal Allowance (basic)	£11,000	£11,500
Married/civil partners (minimum) at 10% *†*	£3,220	£3,260
Married/civil partners at 10% *†*	£8,355	£8,445
Transferable tax allowance for married couples/civil partners	£1,100	£1,150
Income limit for age-related allowances*†*	£27,700	£28,000
Rent a Room relief	£4,250	£7,500
Blind Person's Allowance	£2,290	£2,320
Enterprise Investment Scheme relief limit on £1,000,000 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.

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

NATIONAL INSURANCE CONTRIBUTIONS

Class 1 Employee		**Weekly**
Lower Earnings Limit (LEL)	£113	
Primary threshold	£157	
Upper Earnings Limit (UEL)	£866	

Total earnings £ per week	**CLASS 1 EMPLOYEE CONTRIBUTIONS**
Up to 157.00*****	Nil
157.01 – 866.00	12%
Above 866.00	2%

**This is the primary threshold below which no NI contributions are payable. However, the lower earnings limit is £113 per week. This £113 to £157 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 157.00**	Nil
157.01 – 866.00	13.8%
Excess over 866.00	13.8%

*** Secondary earnings threshold.*

Class 2 (self-employed)	Flat rate per week £2.85 where profits exceed £6,025 per annum.
Class 3 (voluntary)	Flat rate per week £14.25.
Class 4 (self-employed)	9% on profits between £8,164 - £45,000. 2% on profits above £45,000.

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

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, which is subsequently taxed under PAYE.

ANNUAL ALLOWANCE

TAX YEAR	ANNUAL ALLOWANCE
2011/2012	£50,000
2012/2013	£50,000
2013/2014	£50,000
2014/2015	£40,000
2015/2016	£40,000~
2016/2017	£40,000*
2017/2018	£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 at a rate of £1 for every £2 of adjusted income in excess of £150,000 where threshold income exceeds £110,000.*

MONEY PURCHASE ANNUAL ALLOWANCE	2016/2017	2017/2018
	£10,000	£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	2016/2017	2017/2018
Individuals, estates etc	£11,100	£11,300
Trusts generally	£5,550	£5,650
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%
Entrepreneurs' Relief* – Gains taxed at:	10%	10%
Lifetime limit	£10,000,000	£10,000,000

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

INHERITANCE TAX

RATES OF TAX ON TRANSFERS	2016/2017	2017/2018
Transfers made on death after 5 April 2015		
- Up to £325,000	Nil	Nil
- Excess over £325,000	40%	40%
Transfers made after 5 April 2015		
- 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

	2016/2017	2017/2018
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*	£100,000	£100,000
- 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*

	2016/2017	2017/2018
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%

CAR BENEFIT FOR EMPLOYEES

The charge for company car benefits is based on the carbon dioxide (CO_2) emissions. There is no reduction for high business mileage users.

For 2017/2018:

- The percentage charge is 9% of the car's list price for CO_2 emissions of 50g/km or less.
- For cars with CO_2 emissions of 51g/km to 75g/km the percentage is 13%.
- For cars with CO_2 emissions of 76g/km to 94g/km the percentage is 17%.
- Cars with CO_2 emissions of 95g/km have a percentage charge of 18% and thereafter the charge increases by 1% for every complete 5g/km to a maximum of 37% (emissions of 200g/km and above).

There is an additional 3% supplement for diesel cars not meeting Euro IV emission standards. However, the maximum charge remains 37% of the car's list price.

Car fuel The benefit is calculated as the CO_2 emissions % relevant to the car and that % applied to a set figure (£22,600 for 2017/2018) e.g. car emission 100g/km = 17% on car benefit scale. 17% of £22,600 = £3,842.

1. **Accessories** are, in most cases, included in the list price on which the benefit is calculated.
2. **List price** is reduced for capital contributions made by the employee up to £5,000.
3. **Car benefit** is reduced by the amount of employee's contributions towards running costs.
4. **Fuel scale** is reduced only if the employee makes good **all** the fuel used for private journeys.
5. **All car and fuel benefits** are subject to employers National Insurance contribution's (Class 1A) of 13.8%.

PRIVATE VEHICLES USED FOR WORK

	2016/2017 Rates	2017/2018 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

	2016/2017	2017/2018
Plant & machinery (excluding cars) 100% annual investment allowance (first year)	£200,000	£200,000
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	8%	8%
Energy & water-efficient equipment	100%	100%
Zero emission goods vehicles (new)	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:	75 or less*	76-130	131 or more
Capital allowance:	100% first year	18% reducing balance	8% reducing balance

**If new*

MAIN SOCIAL SECURITY BENEFITS

		2016/2017	2017/2018
		£	£
Child Benefit	First child	20.70	20.70
	Subsequent children	13.70	13.70
	Guardian's allowance	16.55	16.70
Employment and Support Allowance	Assessment Phase		
	Age 16 – 24	Up to 57.90	Up to 57.90
	Aged 25 or over	Up to 73.10	Up to 73.10
	Main Phase		
	Work Related Activity Group	Up to 102.15	Up to 102.15
	Support Group	Up to 109.30	Up to 109.65
Attendance Allowance	Lower rate	55.10	55.65
	Higher rate	82.30	83.10
basic State Pension	Single	119.30	122.30
	Married	190.80	195.60
new State Pension	Single	155.65	159.55
Pension Credit	Single person standard minimum guarantee	155.60	159.35
	Married couple standard minimum guarantee	237.55	243.25
	Maximum savings ignored in calculating income	10,000.00	10,000.00
Bereavement Payment Support Payment*		2,000.00	2,000.00
Higher rate - lump sum		N/A	3,500.00
Higher rate - monthly payment		N/A	350.00
Standard rate – lump sum		N/A	2,500.00
Standard rate – monthly payment		N/A	100.00
Jobseekers Allowance	Age 18 - 24	57.90	57.90
	Age 25 or over	73.10	73.10
Statutory Maternity, Paternity and Adoption Pay		139.58	140.98

*Only applicable where spouse or civil partner died on or after 6 April 2007**

CORPORATION TAX

	2016/2017	2017/2018
Standard rate	20%	19%

VALUE ADDED TAX

	2016/2017	2017/2018
Standard rate	20%	20%
Annual registration threshold	£83,000	£85,000
Deregistration threshold	£81,000	£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%

Stamp Duty Land Tax (SDLT) is payable in England, Wales and Northern Ireland only. Land and Buildings Transaction Tax (LBTT) is payable in Scotland at different rates to the above.

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

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

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