THE CHARTERED INSURANCE INSTITUTE

AF4

Advanced Diploma in Financial Planning

Unit AF4 – Investment planning

April 2016 examination

SPECIAL NOTICES

All questions in this paper are based on English law and practice applicable in the tax year 2015/2016, 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.

Candidates should answer based on the legislative position immediately BEFORE the 2016 budget.

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 the following carefully, then carry out **ALL** of the tasks **(a)**, **(b)**, **(c)**, **(d)** and **(e)** which follow.

Paul has an income objective and currently holds a portfolio of UK listed corporate bonds, in Table 1 below. He invested £10,000 in each issue at the par price of £100. Each coupon is paid annually.

Table 1

Company	Current Price £	Time to Redemption years	Coupon £
Arctic Oil	75	5	6
Alpha Property	105	4	6
Lending Bank	103	2	5
National Water	112	9	4
Direct Underwriting	101	5.5	5.5

Paul is considering a new investment of £10,000 into a bond issued by Mediscene, a FTSE 100 pharmaceutical company with a yield to redemption of 4%. As an alternative, Paul is considering buying shares in Mediscene priced at £2 with an annual dividend of 10p.

Paul has inherited the investment trust, in Table 2 below, invested in global equities.

The investment trust has a £2,500,000 bank loan fixed at 3%. The company has advised that they will be seeking to raise additional funds via a 'C' share offer in the next three months at a fixed price of 100p, which will be run separately from the existing shares but with the same investment approach, gearing and objectives.

Table 2

Company Name	Number of shares in issue	Current Price per share (p)	Net Asset Value per share (p)	Annual Dividend per share (p)
Global Equity Investment Trust	20,000,000	116	104	8

Questions

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

(a) **(i)** Explain what is meant by 'duration' for a corporate bond investment. **(5)**

(ii) Explain the likely impact on Lending Bank and National Water bonds in the event of an increase in interest rates of 1%. **(5)**

(iii) Explain why Paul may have chosen to select bonds that mature in different years. **(6)**

(iv) Calculate, **showing all your workings**, the running yield of the portfolio weighted by the current price of the bonds. **(4)**

(v) Calculate, **showing all your workings**, the simplified redemption yield of the Arctic Oil bond. **(5)**

(vi) Explain why the Arctic Oil bond price is significantly below the par price. **(4)**

(b) **(i)** The next coupon of the Mediscene bond is due in three months.

Explain briefly what is meant by the term 'accrued interest' and how this is treated in the purchase amount Paul would pay for the bond. **(3)**

(ii) Explain why Paul may choose to invest in the Mediscene shares rather than the bond and state the additional risk factors he should be aware of. **(9)**

(c) Identify and explain **five** risks of investing in UK based corporate bonds. **(10)**

QUESTIONS CONTINUE OVER THE PAGE

(d) **(i)** Calculate, **showing all your workings**, the current gearing ratio of the Global Equity Investment Trust. **(4)**

(ii) Explain briefly how the gearing via the bank loan could enhance returns for the Global Equity Investment Trust. **(4)**

(iii) Calculate, **showing all your workings**, the current percentage premium to net asset value that the Global Equity Investment Trust is trading at. **(4)**

(iv) State **four** reasons that could cause the Global Equity Investment Trust premium to narrow. **(4)**

(v) State **two** potential advantages and **two** potential disadvantages of investing in the forthcoming 'C' share issue rather than buying the existing shares. **(4)**

(e) The manager of the Global Equity Investment Trust also runs a unit trust which is invested in a similar way.

(i) Explain **five** differences in the structure of the two funds. **(5)**

(ii) Explain why the performance of the Global Equity Investment Trust and the unit trust may differ. **(4)**

Total marks available for this question: 80

Section B questions can be found on pages 8 – 11

SECTION B

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

Question 2

Read the following carefully, then carry out **ALL** of the tasks **(a)**, **(b)**, **(c)** and **(d)** which follow.

John, who wishes to invest for a steady income, has identified a jewellery manufacturing company with suitable dividend payments called Luxury Goods plc. John would like to understand how to assess the quality of returns shown by the company, as he would not wish an investment exhibiting too much volatility.

The following data is extracted from the latest accounts of Luxury Goods plc. The company has 100 million shares in issue and the annual dividend per share is 60p which represents a dividend yield of 5%.

Luxury Goods plc	£million
Profit before interest and taxation	75
Interest paid	24
Taxation	4
Long term debt	650
Shareholders' funds	760

Questions

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

(a) **(i)** Identify the two components of shareholders' funds. **(2)**

(ii) Calculate, **showing all your workings**, the return on equity (ROE) for Luxury Goods plc. **(5)**

(iii) Calculate, **showing all your workings**, the return on capital employed (ROCE) for Luxury Goods plc. **(4)**

(iv) Explain why ROE and ROCE are used to evaluate a share's returns. **(3)**

(v) Explain which is the more useful measure when comparing Luxury Goods plc against its competitors. **(3)**

(b) **(i)** Calculate, **showing all your workings**, Luxury Goods plc current interest cover. **(3)**

(ii) State, giving your reasons, whether the company should be concerned with the level of interest cover based on your answer to part **(b)(i)** above. **(4)**

(c) John has read that Luxury Goods plc is a cyclical share.

Explain to John the meaning of a 'cyclical share' and why Luxury Goods plc might fall into that category, stating how this will affect the company's profits and share price. **(7)**

(d) **(i)** Calculate, **showing all your workings,** the share price of Luxury Goods plc. **(3)**

(ii) Explain, giving your reasons, why Luxury Goods plc may not be a suitable investment given John's objectives. **(6)**

Total marks available for this question: 40

QUESTIONS CONTINUE OVER THE PAGE

Question 3

Read the following carefully, then carry out **ALL** of the tasks **(a)**, **(b)**, **(c)** and **(d)** which follow.

Martin is comparing the performance of the two UK Equity funds in his portfolio in the following table, which are benchmarked against the FTSE 100 Index. In light of the three year performance, he is considering selling the UK Undervalued fund and replacing it with a fund that tracks the Index.

Martin initially invested £5,000 in each fund in April 2013 and then a further £5,000 in April 2014 and 2015.

	3 Year Performance %	**Volatility**	**Beta**	**Sharpe Ratio**	**Alpha**
UK Undervalued fund	33	8.42	0.82	1.08	2.33
UK Growth fund	40	10.45	1.19	0.97	1.84
FTSE 100 Index	34				

Questions

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

(a) **(i)** Using the performance rate given in the table, calculate, **showing all your workings**, the annual rate of return for the UK Undervalued fund over the three year period. **(5)**

(ii) You have calculated the money weighted rate of return on the Undervalued fund is 7.9% per annum over the three year period.

Explain why this return differs from the return calculated in part **(a)(i)** above. **(3)**

(b) **(i)** Comment on the return of the UK Growth fund and the reason for its relative performance. **(3)**

(ii) Using the information given in the table, explain, giving your reasons, why an analysis of the data may cause John to reconsider selling the UK Undervalued fund, commenting specifically on the beta and alpha of his investments. **(6)**

(c) **(i)** Explain how the value of the FTSE 100 Index is calculated. *No calculations are required.* **(4)**

(ii) State **three** methods that a fund tracking the FTSE 100 Index may utilise. **(3)**

(iii) State **three** advantages and **three** disadvantages of an Index tracking fund compared to an actively managed fund. **(6)**

(d) Martin is aware of a passive strategy which weights companies in the FTSE 100 Index based on price to book value, free cashflow and dividend yield.

(i) Explain to Martin how this approach attempts to overcome some of the drawbacks of a traditional tracker. **(4)**

(ii) Explain to Martin how the price to book value, free cashflow and dividend yield are calculated. *No calculations are required.* **(6)**

Total marks available for this question: 40

The tax tables can be found on pages 13 – 19

INCOME TAX

RATES OF TAX	2014/2015	2015/2016
Starting rate for savings*	10%	0%
Basic rate	20%	20%
Higher rate	40%	40%
Additional rate	45%	45%
Starting-rate limit	£2,880*	£5,000*
Threshold of taxable income above which higher rate applies	£31,865	£31,785
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

**Restricted to savings income only and not available if taxable non-savings income exceeds starting rate band.*

MAIN PERSONAL ALLOWANCES AND RELIEFS		
Income limit for Personal Allowance §	£100,000	£100,000
Personal Allowance (basic if born after 5 April 1948) §	£10,000	£10,600
Personal Allowance (if born between 6 April 1938 and 5 April 1948) §	£10,500	£10,600
Personal Allowance (if born before 6 April 1938) §	£10,660	£10,660
Married/civil partners (minimum) at 10% †	£3,140	£3,220
Married/civil partners at 10% †	£8,165	£8,355
Transferable tax allowance for married couples/civil partners	N/A	£1,060
Income limit for age-related allowances §	£27,000	£27,700
Blind Person's Allowance	£2,230	£2,290
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)	£2,750	£2,780
- family element	£545	£545
Threshold for tapered withdrawal of CTC	£16,010	£16,105

NATIONAL INSURANCE CONTRIBUTIONS

Class 1 Employee	Weekly	Monthly	Yearly
Lower Earnings Limit (LEL)	£112	£486	£5,824
Primary threshold	£155	£672	£8,060
Upper Accrual Point	£770	£3,337	£40,040
Upper Earnings Limit (UEL)	£815	£3,532	£42,385

Total earnings £ per week	CLASS 1 EMPLOYEE CONTRIBUTIONS	
	Contracted-in rate	Contracted-out rate (final salary)
Up to 155.00*	Nil	Nil
155.01 – 770.00	12%	10.6%
770.01 – 815.00	12%	12%
Above 815.00	2%	2%

**This is the primary threshold below which no NI contributions are payable. However, the lower earnings limit is £112 per week. This £112 to £155 band is a zero rate band introduced in order to protect lower earners' rights to contributory State benefits e.g. Basic State Pension.*

Total earnings £ per week	CLASS 1 EMPLOYER CONTRIBUTIONS		
	Contracted-in rate	Contracted-out rate	
		Final salary	*Money purchase*
Below 156.00**	Nil	Nil	Nil
156.01 – 770.00	13.8%	10.4%	13.8%
770.01 – 815.00	13.8%	13.8%	13.8%
Excess over 815.00	13.8%	13.8%	13.8%

*** Secondary earnings threshold.*

Class 2 (self-employed)	Flat rate per week £2.80 where profits exceed £5,965 per annum.
Class 3 (voluntary)	Flat rate per week £14.10.
Class 4 (self-employed)	9% on profits between £8,060 - £42,385. 2% on profits above £42,385.

PENSIONS

TAX YEAR	LIFETIME ALLOWANCE	ANNUAL ALLOWANCE
2006/2007	£1,500,000	£215,000
2007/2008	£1,600,000	£225,000
2008/2009	£1,650,000	£235,000
2009/2010	£1,750,000	£245,000
2010/2011	£1,800,000	£255,000
2011/2012	£1,800,000	£50,000
2012/2013	£1,500,000	£50,000
2013/2014	£1,500,000	£50,000
2014/2015	£1,250,000	£40,000
2015/2016	£1,250,000	£40,000 *§*

ANNUAL ALLOWANCE CHARGE

20% - 45% member's tax charge on the amount of total pension input in excess of the annual allowance.

MONEY PURCHASE ANNUAL ALLOWANCE	2014/2015	2015/2016
	N/A	£10,000*

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.

§ increased to £80,000 from 6 April - 8 July 2015. If not used, can be carried forward to 9 July 2015 - 5 April 2016, subject to a maximum of £40,000.
** transitional rules apply to the calculation for pre/post 8 July 2015 position.*

CAPITAL GAINS TAX

EXEMPTIONS	2014/2015	2015/2016
Individuals, estates etc	£11,000	£11,100
Trusts generally	£5,500	£5,550
Chattels proceeds (restricted to five thirds of proceeds exceeding limit)	£6,000	£6,000

TAX RATES		
Individuals:		
Up to basic rate limit	18%	18%
Above basic rate limit	28%	28%
Trustees and Personal Representatives	28%	28%
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	2014/2015	2015/2016
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%

For deaths after 5 April 2015, a lower rate of 36% applies where at least 10% of deceased's net estate is left to 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
- UK-registered charities	No limit	No limit
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	£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%

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 2015/2016:

- The percentage charge is 5% 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 9%.
- For cars with CO_2 emissions of 76g/km to 94g/km the percentage is 13%.
- Cars with CO_2 emissions of 95g/km have a percentage charge of 14% and thereafter the charge increases by 1% for every complete 5g/km to a maximum of 37% (emissions of 210g/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 (£22,100 for 2015/2016) e.g. car emission 100g/km = 15% on car benefit scale. 15% of £22,100 = £3,315.

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

	2014/2015 Rates	2015/2016 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

	2014/2015	2015/2016
Plant & machinery (excluding cars) 100% annual investment allowance (first year) *§*	£500,000	£500,000
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 2015 (Corporation Tax) or 06 April 2015 (Income Tax)

CO_2 emissions of g/km:	75 or less*	76-130	131 or more
Capital allowance:	100%	18%	8%
	first year	reducing balance	reducing balance

**If new*

§ From 01 January 2016 allowance will decrease to £200,000.

CORPORATION TAX

	2014/2015	2015/2016
Full rate	21%	20%
Small companies rate	20%	20%
Small companies limit	£300,000	£300,000
Effective marginal rate	21.25%	20%
Upper marginal limit	£1,500,000	£1,500,000

VALUE ADDED TAX

	2014/2015	2015/2016
Standard rate	20%	20%
Annual registration threshold	£81,000	£82,000
Deregistration threshold	£79,000	£80,000

MAIN SOCIAL SECURITY BENEFITS

		2014/2015	2015/2016
		£	£
Child Benefit	First child	20.50	20.70
	Subsequent children	13.55	13.70
	Guardian's allowance	16.35	16.55
Employment and Support Allowance	Assessment Phase		
	Age 16 – 24	Up to 57.35	Up to 57.90
	Aged 25 or over	Up to 72.40	Up to 73.10
	Main Phase		
	Work Related Activity Group	Up to 101.15	Up to 102.15
	Support Group	Up to 108.15	Up to 109.30
Attendance Allowance	Lower rate	54.45	55.10
	Higher rate	81.30	82.30
Retirement Pension	Single	113.10	115.95
	Married	180.90	185.45
Pension Credit	Single person standard minimum guarantee	148.35	151.20
	Married couple standard minimum guarantee	226.50	230.85
	Maximum savings ignored in calculating income	10,000.00	10,000.00
Bereavement Payment (lump sum)		2,000.00	2,000.00
Widowed Parent's Allowance		111.20	112.55
Jobseekers Allowance	Age 18 - 24	57.35	57.90
	Age 25 or over	72.40	73.10
Statutory Maternity, Paternity and Adoption Pay		138.18	139.58

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