Diploma in Financial Management

PAPER DB1, INCORPORATING SUBJECT AREAS
– FINANCIAL STRATEGY
– RISK MANAGEMENT

TUESDAY 7 DECEMBER 2004

QUESTION PAPER

Time allowed **3 hours**

This paper is divided into three sections

Section A	ALL 20 questions are compulsory and MUST be answered
Section B and Section C	THREE questions in total to be answered. Candidates MUST answer ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C.

Present Value Rates are on page 2.

Do not open this paper until instructed by the supervisor

This question paper must not be removed from the examination hall

The Association of Chartered Certified Accountants

Module B

Present value of £1 receivable in n years at x %

n \ x	6%	10%	14%
0	1·00	1·00	1·00
1	0·94	0·91	0·88
2	0·89	0·83	0·77
3	0·84	0·75	0·68
4	0·79	0·68	0·59

Section A – ALL 20 questions are compulsory and MUST be attempted

Each question within this section is worth 2 marks.
Please use the Candidate Registration Sheet provided to indicate your chosen answer to each multiple choice question.

1 Purus plc is considering four possible investment projects for the current year but has only a limited amount to invest. As a result it will not be able to undertake in full all of the projects available. All of the projects are divisible (i.e. it is possible to undertake part of a project and to receive a pro rata return). Details of each project are as follows:

Project	Investment outlay £m	Present value of net cash inflows £m
Japura	40	48
Branco	45	64
Tapajos	60	66
Napo	70	92

In what order should they be ranked if the business wishes to maximise the wealth of its shareholders?

	Project ranking 1	2	3	4
A	Japura	Branco	Tapajos	Napo
B	Tapajos	Branco	Japura	Napo
C	Branco	Napo	Japura	Tapajos
D	Napo	Tapajos	Branco	Japura

2 Consider the following two statements concerning the returns to investors from debt capital.

(1) Junk bonds normally offer a higher rate of interest than investment-grade bonds
(2) Convertible bonds normally offer a higher rate of interest than non-convertible bonds

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

3 A company holds an item in stock that has the following supplier lead times and consumption rates:

	Maximum	Minimum	Average
Daily consumption	50 units	20 units	25 units
Supplier lead times	10 days	2 days	5 days

The economic order quantity for this unit of stock is 650 units and the re-order level is 500 units.

What is the highest possible number of units of the item that could be held in stock?

A 1,150
B 1,110
C 1,025
D 650

4 Parana plc recently made a tender offer of shares. The number of offers received for each share price is as follows:

Share price	Number of shares tendered at each tender price
£0·75	6·0m
£1·50	4·5m
£2·25	3·2m
£3·00	2·8m

What is the price at which shares should be issued in order to maximise receipts for the company?

A £0·75
B £1·50
C £2·25
D £3·00

5 Consider the following statements concerning capital market efficiency.

Under the weak form of market efficiency:

(1) share prices anticipate new information becoming available
(2) share price movements reveal a detectable trend over time

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

6 Arinos plc has a beta of 1·2 and pays a constant annual dividend to shareholders of 20 pence per share. The average market rate of return is 8% and the risk-free rate of return is 4%.

What is the predicted market value of a share in the company?

A £1·09
B £2·27
C £2·50
D £4·17

7 Meta plc has the following capital structure:

	£000
£0·50 Ordinary shares	4,000
Retained profits	5,000
	9,000

The company has a return on ordinary shareholders' funds of 10 per cent and this level of return is expected to continue after a forthcoming 1-for-4 rights issue at £1·20 per share.

What will be the earnings per share (in pence) following the rights issue?

A 5·0
B 10·0
C 11·4
D 22·8

8 Which one of the following statements concerning sources of finance is correct?

A Retained earnings represent a free source of finance to the business
B Invoice discounting involves the administration of debtors by the invoice discounter
C A bank overdraft is normally regarded as a long-term source of finance
D Mezzanine finance normally has both a debt and an equity element

9 Chubut plc agreed to purchase all the shares of Mamore plc in a share-for-share exchange. Details of each company are as follows:

	Chubut plc	**Mamore plc**
Number of shares in issue	20·0m	8·0m
Profits before tax	£15·0m	£3·6m
Profits after tax	£10·0m	£2·4m

Chubut plc has a P/E ratio of 16 times and has agreed to acquire Mamore plc's shares for a price based on this ratio.

Assuming no earnings growth, what will be the earnings per share of Chubut plc following the acquisition?

A £0·37
B £0·44
C £0·50
D £0·75

10 Consider the following statements.

When using the net present value method of investment appraisal, the required rate of return from investors is used as the appropriate discount factor. This rate of return should be:

(1) calculated on an after-tax basis
(2) expressed in real terms if the cash flows are expressed in terms of the actual number of pounds to be received.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	**Statement 2**
A	True	True
B	True	False
C	False	True
D	False	False

11 Consider the following statements concerning financial options.

1. A European-style option gives the holder the right to exercise the option at any time up to and including its expiry date.
2. An in-the-money option has a more favourable strike price for the option writer than the current market price of the underlying item.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	**Statement 2**
A	True	True
B	True	False
C	False	True
D	False	False

12 Lynher plc has ordinary shares with an estimated beta value of 1·4. The expected returns to the market are 8 per cent and the risk free rate is 5 per cent. The company's shares are achieving a return of 11 per cent.

What is the alpha value of the shares?

A 1·2%
B 1·8%
C 3·0%
D 6·8%

13 Kajan plc has recently issued a dividend of £0·20 per share. The company has a constant dividend payout ratio of 30 per cent and achieves a 10 per cent return on new investments.

What is the predicted market value of a share in the company?

A £1·13
B £2·94
C £6·67
D £7·13

14 Dart plc is financed entirely by equity shares and has a cost of capital of 10%. Onega plc is identical to Dart plc except that it is financed by 600,000 £1 ordinary shares, currently trading at £2·50, and £500,000 of 6% loan stock, currently trading at £80 per £100.

Using Modigliani and Miller (ignoring taxation), what is the cost of equity capital in Onega plc?

A 10·7%
B 11·8%
C 14·2%
D 19·4%

15 Three derivatives that may be used to manage financial risk are as follows:

1. Futures contracts
2. Forward contracts
3. Swaps

Which of the above may be traded on an organised exchange?

A 1 only
B 1 and 2
C 2 only
D 2 and 3

16 The Combined Code states that:

1. The directors should conduct a review of the system of internal controls at least once every two years.
2. The directors should submit themselves for re-election at least once every three years.

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

17 Aldan plc is based in the UK and has agreed to purchase goods worth 5 million levs from a Bulgarian supplier. Payment is due in three months' time. The current spot rate of exchange is £1 = 2·77 levs and the company wishes to hedge the currency risk by taking out an option on Bulgarian levs. At a strike rate of £1 = 2·75 levs, a call option can be purchased for £0·30 per 100 levs and a put option can be purchased for £0·25 per 100 levs.

Assuming that the option is entered into and that the spot rate in three months' time is £1 = 2·76 levs, what is the total cost of purchasing the goods?

A £1,824,094
B £1,826,594
C £1,830,682
D £1,833,182

18 A French company is due to pay $3 million in six months' time to a US supplier. In order to hedge against currency risk, the French company decides to sell euro futures immediately at €1 = $1·1306 and to buy them back in six months' time. The contract size is €125,000 and the tick value is $12·50. (Work to the nearest contract.)

Assuming that in six months' time the spot rate is €1 = $1·1274 and the euros future rate is €1 = $1·1289, what is the hedging gain or loss on the futures contract?

A $4,463 loss
B $8,400 loss
C $4,463 gain
D $8,400 gain

19 Indus plc wishes to fix the interest rate for a six-month period on a £20 million loan that it plans to take out in three months' time. The company decides to use a forward rate agreement (FRA) to hedge the interest rate risk and a bank quotes the following rates:

	Bid	Offer
3 v 6	6·60	6·56
3 v 9	6·65	6·61

The company can borrow at 60 basis points above LIBOR and, at the fixing date, the relevant LIBOR is 6·4%.

What is the amount of interest (in percentage terms) that the company will pay to, or receive from, the bank as a result of the forward rate agreement?

A 0·20% paid to bank
B 0·25% paid to bank
C 0·35% received from bank
D 0·39% received from bank

20 Consider the following statements concerning capital structure.

According to both the traditional view and the Modigliani and Miller (including taxes) view of capital structure:

1. the point at which the weighted average cost of capital is minimised provides the optimal capital structure for a company
2. the weighted average cost of capital is minimised at the maximum level of gearing

Which one of the following combinations (true/false) concerning the above statements is correct?

	Statement 1	Statement 2
A	True	True
B	True	False
C	False	True
D	False	False

(40 marks)

Section B – Candidates MUST attempt ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C.

1 Mezen Ltd is currently considering the launch of a new product. A market survey was recently commissioned to assess the likely demand for the product and this showed that the product has an expected life of four years. The survey cost £30,000 and this is due for payment in four months' time. On the basis of the survey information as well as internal management accounting information relating to costs, the assistant accountant prepared the following profit forecasts for the product.

Year	1	2	3	4
	£000	£000	£000	£000
Sales	180	200	160	120
Cost of sales	(115)	(140)	(110)	(85)
Gross profit	65	60	50	35
Variable overheads	(27)	(30)	(24)	(18)
Fixed overheads	(25)	(25)	(25)	(25)
Market survey written off	(30)	–	–	–
Net profit/(loss)	(17)	5	1	(8)

These profit forecasts were viewed with disappointment by the directors and there was a general feeling that the new product should not be launched. The Chief Executive pointed out that the product achieved profits in only two years of its four-year life and that over the four-year period as a whole, a net loss was expected. However, before a meeting that had been arranged to decide formally the future of the product, the following additional information became available:

(i) The new product will require the use of an existing machine. This has a written down value of £80,000 but could be sold for £70,000 immediately if the new product is not launched. If the product is launched, it will be sold at the end of the four-year period for £10,000.

(ii) Additional working capital of £20,000 will be required immediately and will be needed over the four-year period. It will be released at the end of the period.

(iii) The fixed overheads include a figure of £15,000 per year for depreciation of the machine and £5,000 per year for the re-allocation of existing overheads of the business.

The company has a cost of capital of 10%.

Ignore taxation.

Required:

(a) Calculate the incremental cash flows arising from a decision to launch the product. (9 marks)

(b) Calculate the approximate internal rate of return of the product. (4 marks)

(c) State, with reasons, whether or not the product should be launched. (2 marks)

(d) Outline the strengths and weaknesses of the internal rate of return method as a basis for investment appraisal. (5 marks)

(20 marks)

2 Ebro Ltd is a wholesale carpet seller that provides carpets to small and medium-size retail businesses. The most recent accounts of the business are set out below.

Balance sheet as at 30 November 2004

	£000	£000	£000
Fixed assets			
Freehold land and buildings at cost		840	
Less: accumulated depreciation		110	730
Fixtures and fittings at cost		62	
Less: accumulated depreciation		24	38
Motor vans at cost		360	
Less: accumulated depreciation		150	210
			978
Current assets			
Stocks	780		
Trade debtors	460	1,240	
Less creditors: amounts falling due within one year			
Trade creditors	780		
Proposed dividend	120		
Taxation	210		
Bank overdraft	330	1,440	(200)
			778
Capital and reserves			
Ordinary £1 shares			100
Profit and loss account			678
			778

Profit and loss account for the year ended 30 November 2004

	£000	£000
Sales		4,850
Less: Cost of sales		
Opening stock	820	
Purchases	2,590	
	3,410	
Less: Closing stock	780	2,630
Gross profit		2,220
Less: Overhead expenses		1,240
Net profit before taxation		980
Corporation tax		210
Net profit after taxation		770
Proposed dividend		120
Retained profit for the year		650

All purchases and sales were on credit and the debtors and creditors outstanding at the beginning of the year were lower by 10 per cent and 20 per cent respectively than those at the end of the year.

The directors of Ebro Ltd are being pressed by the bank to significantly reduce the overdraft. Some of the directors wish to do this by reducing the operating cash cycle of the company. However, other directors would prefer to use an external source of short-term finance.

Required:

(a) Explain the term 'operating cash cycle' and discuss why this concept is important to the financial management of a company. (4 marks)

(b) State how the operating cash cycle may be reduced and outline the problems that the company may face if it seeks to reduce its operating cash cycle. (5 marks)

(c) Calculate the operating cash cycle of the company for the most recent year. (7 marks)

(d) Identify and discuss an EXTERNAL source of short-term finance that may be used to reduce the overdraft of the business. (4 marks)

(20 marks)

3 Venture capital is an important source of capital for some businesses.

Required:

(a) Explain what is meant by the term 'venture capital' and identify the main types of business ventures that are likely to be an attractive investment for a venture capitalist. (7 marks)

(b) Outline the main issues that the board of directors of a company should take into account when considering the use of venture capital finance. (4 marks)

(c) Discuss the main factors that a venture capitalist will consider when assessing an investment proposal. (9 marks)

(20 marks)

Section C – Candidates MUST attempt ONE question from Section B, ONE question from Section C and ONE further question from either Section B or Section C.

4 Cuando plc is an on-line retailer of books, CDs and DVDs. The company was set up five years ago by a wealthy entrepreneur, David Nile, and has now grown to the point where the Board of Directors has decided that a listing should be sought on the Alternative Investment Market (AIM). David Nile owns 80 per cent of the ordinary shares and has agreed to sell all of these as part of the public offering.

Recently, the Board of Directors began to debate the future dividend policy of the company, assuming that the AIM listing would be successful. However, there was a clear divergence of views. The Chairman felt that the current dividend policy was unacceptable and needed to be changed. He argued that the company had been investing heavily in its distribution methods and in advertising in the early years and that dividend policy had not been a pressing issue. However, the proposed AIM listing must now lead to a reconsideration of the importance of dividends. The Chief Operating Officer, on the other hand, felt that the Chairman's concerns were unfounded as the pattern of dividends had no effect on shareholder wealth.

Information concerning the company since it was first set up is as follows:

Year ended 30 November	Net profits after taxation £000s	Ordinary dividends £000s	Ordinary shares in issue 000s
2000	650	320	800
2001	520	150	1,000
2002	760	480	1,000
2003	1,240	600	1,500
2004	1,450	540	1,500

Required:

(a) Evaluate the views expressed by the Chief Operating Officer and by the Chairman. (10 marks)

(b) Examine the dividend policy that has been pursued to date and discuss whether a change would be in the interests of shareholders. (6 marks)

(c) Discuss the key points that should be taken into account when establishing an appropriate dividend policy for the company. (4 marks)

(20 marks)

5 Kasai plc operates a chain of vegetarian restaurants in the UK. In recent years it has grown rapidly and is now looking to expand its operations. An investment opportunity has recently been brought to the company's attention by one of its suppliers. A large multinational company has decided to sell off a small chain of vegetarian restaurants in Wales and Kasai plc has agreed to buy the restaurant chain for £15 million. The company must pay the purchase price immediately and has decided to finance the acquisition by borrowing £15 million at a floating rate of LIBOR + 0·80% with interest payable at the end of the year.

The company is concerned that interest rates may fluctuate over the next year and is considering what action, if any, should be taken to hedge the interest rate. The company has been offered a cap at LIBOR 7·0% for a premium of 1·1% per year and a bank has offered to buy a floor from the company at LIBOR 5·1% for a premium of 0·8% per year. Three options are currently being explored by the company, which are:

(1) to purchase a cap;
(2) to purchase a collar;
(3) to do nothing.

Required:

(a) Briefly describe the main features of a cap, a floor and a collar and outline the advantages and disadvantages of each. (8 marks)

(b) Calculate the effective interest rates from each option assuming the LIBOR rate for next year is:

(i) 4·7%;
(ii) 5·8%;
(iii) 7·3%.

and briefly comment on the results. (8 marks)

(c) Identify and discuss an alternative method of hedging against interest rate movements that the company might consider. (4 marks)

(20 marks)

6 'Securitisation may be the wave for the future, as it appears to be a more efficient mechanism for bringing borrowers and investors together than traditional financing through intermediaries' (Fabozzi and Modigliani)

Required:

Explain the term 'securitisation'. Describe how securitisation works and discuss the benefits that may accrue to a company that uses this technique.

(20 marks)

End of Question Paper