CIMA

Intermediate Level

Finance

4

IFIN

20 May 2003

Tuesday morning

INSTRUCTIONS TO CANDIDATES

Read this page before you look at the questions

You are allowed three hours to answer this question paper.
Answer the ONE question in section A (this has 10 sub-questions). Answer the ONE question in section B. Answer TWO questions ONLY from section C.
Maths Tables and Formulae were provided at the end of the questions and are available elsewhere on the website
Write your examination number in the boxes provided on the front of the answer book. Write IFIN on the line marked "Subject" on the front of the answer book. Write your examination number on the special answer sheet for section A which is on page 3 of this question paper booklet. Detach the sheet from the booklet and insert it into your answer book before you hand this in.
Do NOT write your name or your student registration number anywhere on your answer book.
Tick the appropriate boxes on the front of the answer book to indicate which questions you have answered.

SECTION A — 20 MARKS

ANSWER *ALL* TEN SUB-QUESTIONS – 2 MARKS EACH

Each of the sub-questions numbered from **1.1** to **1.10** inclusive, given below, has only ONE correct answer.

Required:

On the SPECIAL ANSWER SHEET opposite, place a circle "O" around the letter that gives the correct answer to each sub-question.

If you wish to change your mind about an answer, block out your first answer completely and then circle another letter. You will not receive marks if more than one letter is circled.

Please note that you will not receive marks for any workings to these sub-questions.

You must detach the special answer sheet from the question paper and attach it to the inside front cover of your answer book before you hand it to the invigilators at the end of the examination.

Question One

1.1 Which of the following is MOST TRUE of a semi-strong efficient market?

A No profit can ever be made on share trading.

B Share prices will respond to all information within a few days**.**

C All shareholders have the same information.

D Share prices respond to new publicly available information.

1.2 Which of the following is LEAST LIKELY to be an advantage of setting up a treasury department as a profit centre?

A It encourages the generation of profits by speculation on foreign exchange transactions.

B It encourages more efficient use of treasury department services.

C It enables arm's length performance measurement of the treasury function.

D It provides improved motivation for treasury staff.

1.3 A company makes a rights issue at an issue price of £5 per share. The cum rights price is £8 per share. The theoretical ex rights price is £7 per share.

What were the terms of the rights issue?

A 1 for 3.

B 3 for 1.

C 1 for 2.

D 2 for 1.

1.4 Examine the validity of the following statements with respect to the traditional model of gearing:

Statement 1

If a company's capital structure is below the optimal level of gearing, then an increase in equity will, all other things being equal, reduce the weighted average cost of capital.

Statement 2

If a company's capital structure is above the optimal level of gearing, then an increase in debt will, all other things being equal, decrease the weighted average cost of capital.

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

1.5 Which of the following is likely to have the LOWEST expected rate of return?

A Unsecured bank loan.

B Preference shares.

C Secured debentures.

D Equity shares.

1.6 The cost of purchasing a machine is £100,000 payable immediately. Its disposal value is expected to be £10,000 in five years' time.

The same asset can be leased for a period of five years with rentals of £25,000 payable annually in advance. The asset is returned to the lessor at the end of the lease period.

What is the net present value (to the nearest £10) to the lessor company if it purchases the machine then leases it to the user on the above terms if it applies an annual discount rate of 10%? (Ignore tax.)

A £990

B £10,460

C minus £1,960

D minus £11,440

1.7 A company's profit and loss account contains the following:

	£ million
Gross profit	50
Operating profit	30
Interest	6
Taxation	8

The nominal value of the ordinary shares is £1 and their market value is £8.

The issued share capital is 10 million shares.

What is the price/earnings ratio?

A 0·5

B 2·67

C 3·33

D 5

1.8 Which of the following would be LEAST LIKELY to arise from the introduction of a just-in-time stock ordering system?

A Lower stockholding costs.

B Less risk of stock shortages.

C More frequent deliveries.

D Increased dependence on suppliers.

1.9 A company has a current ratio of 2:1. Due to having significant surplus cash balances, it has decided to pay its trade creditors after 30 days in future, rather than after 50 days as it has in the past.

What will be the effect of this change on the company's current ratio and its cash operating cycle?

	Current ratio	*Cash operating cycle*
A	Increase	Increase
B	Increase	Decrease
C	Decrease	Increase
D	Decrease	Decrease

1.10 When debtors are sold to a debt factoring company, which of the following is LEAST likely?

A Cash will be received sooner than if debts were not sold.

B The debtors will be sold at a profit to the selling company.

C The debt factoring company will make a profit on the service provided.

D Working capital will decrease.

(Total = 20 marks)

SECTION B – 30 MARKS
ANSWER THIS QUESTION

Question Two

EEE plc is a manufacturer of oil drilling platforms and is based in the United Kingdom. Its shares are listed on a recognised stock exchange. The accounting year end is 31 March.

Oil drilling platforms (which are called "rigs") are made to order for customers, who are normally major international oil companies. Due to difficult trading conditions, the number of contracts over the past few years has stabilised at a constant level of two per month (that is, 24 per annum). Each contract is for one rig. Recent market research, however, has estimated that the orders for the year to 31 March 2004 will be high, but this is expected to be followed by two years of lower orders before sales return to their previous levels of two per month.

Production work on a contract begins as soon as an order is received. The following shows data for ***EACH MONTH*** during years ending 31 March.

Year end 31 March	*Contracts commenced each month*
2003	2
2004	4 (estimated)
2005	1 (estimated)
2006	1 (estimated)
2007 and thereafter	2 (estimated)

Orders can be assumed to be received at regular intervals during the year, beginning with the first order on 1 April each year.

Each rig sells for £10 million and production costs per rig are £8 million.

Each platform takes a year to complete and the terms of business are that 25% of the selling price is receivable by EEE plc when a rig is half complete (that is, after six months) and the remaining 75% is receivable by EEE plc on completion of the rig.

Thus, for example, for those contracts *commenced* in the year ended 31 March 2003, the cash revenue flows are as follows:

		Years ended 31 March	
		2003	*2004*
		£ million	*£ million*
12 contracts:			
at least half complete at year end	(12 x £10 million x 25%)	30	
completed in the following year	(12 x £10 million x 75%)		90
12 contracts:			
not half-completed by year end, but completed in following year			120

All cash production costs on each contract can, for simplicity, be assumed to be paid when a rig is one-third complete (that is, after four months).

Thus, for example, for those contracts *commenced* in the year ended 31 March 2003, the cash outflows for production costs are as follows:

		Years ended 31 March	
		2003	2004
		£ million	£ million
16 contracts:			
at least one-third complete at year end	(16 x £8 million)	128	
8 contracts:			
not one-third complete until following year	(8 x £8 million)		64

The company also incurs annual fixed cash administration costs of £50 million, which are all paid within the year.

There was a surplus cash balance of £10 million at 1 April 2003.

As an assistant to the Finance Director, you have been asked to draft a response, on his behalf, to the following memorandum received from the Chief Executive.

MEMORANDUM	*Approximate number of marks available for the points raised by the Chief Executive*
From: Beverley Barnes (Chief Executive) *To:* John James (Finance Director) *Subject:* Cash surpluses and shortages *Date:* 20 May 2003	
I have just received our marketing department's estimate of expected orders for the next few years. Frankly, I am very worried about how we are going to finance this volatile production and, indeed, what we are going to do about any surplus cash that might be generated, when it is received. Please write me a report covering these issues.	
I do ***not*** need detailed monthly calculations at this stage. I would, however, like to see calculations of ***annual*** cash flows in each of the accounting years ending 31 March 2004 to 2007, together with an explanation of changes that occur in the cash surplus / deficit. Please state any assumptions that you make.	*(11 marks)*
I would also like you to analyse the financing implications of your cash flow calculations and to describe your suggestions for investing short-term cash surpluses, giving your reasons.	*(12 marks)*
Perhaps you could also briefly consider our long-term cash flow.	*(2 marks)*
A further worry is that a competitor had a fire on one of its rigs and all orders for the following year had to be cancelled while it was investigated. Could you consider, in your response, the financing implications (*without calculations*) of this happening to us?	*(5 marks)*

Required:

Prepare a draft response to the Chief Executive's memorandum.

(Total = 30 marks)

SECTION C – 50 MARKS

ANSWER TWO QUESTIONS ONLY

Question Three

DDD plc runs a chain of 26 garden centres which sell plants, gardening implements and a range of other gardening products. It is listed on an international stock exchange and it has an accounting year end of 30 June.

The company plans to open three new garden SuperCentres in 2004. Unlike existing stores, they will also sell garden furniture.

Each of the three new stores will cost £6 million to build and each will carry £3·5 million of stocks. The following budgeted summary balance sheet at 30 June 2003 (which *excludes* the three new SuperCentres) was presented at a meeting of the board:

	£ million
Land and buildings	26
Other fixed assets	13
Stocks	16
Debtors	1
Cash	1
Trade creditors	(3)
Loans	(24)
	30
Share capital (£1 shares)	10
Retained profits	20
	30

The balance sheet valuation for land and buildings reflects their current market values.

Chief Executive:
"I believe that we should raise new equity to finance the new SuperCentres. Our share price has risen from £4 a year ago to £6 today. I believe that we should take advantage of this high share price and issue shares now in case the share price falls again. Moreover, our dividend yield is only 3% – this is cheap finance at low risk."

Non-Executive Director:
"I am not keen on raising new external finance. We should use our retained profits of £20 million to finance most of the new land, buildings and stocks. To finance the remaining amount, we should sell the least profitable of our existing garden centres. This approach will save all the issue costs and all the uncertainty involved in raising new external finance."

Finance Director:
"I am in favour of raising new debt to finance the expansion. The return on these new SuperCentres is bound to be greater than the cost of debt, so a profit is assured, and thus the risk is minimal."

There are two alternatives:

Alternative 1: Issue £30 million of 7% corporate bonds. These would be issued on 1 July 2003 at a 5% discount and would be repayable on 30 June 2008 at their nominal value. Interest would be payable annually in arrears on 30 June each year.

Alternative 2: Raise a bank loan of £28·5 million on 1 July 2003. The interest rate would be 5% per annum for the first 3 years and 10% per annum for the following 3 years. The loan would be repayable on 30 June 2009. Interest would be payable annually in arrears on 30 June each year.

Assume that interest paid can be relieved for tax at a rate of 30%. Assume tax is payable at the end of the year in which the taxable profits arise and sufficient profits exist to set off all interest payments.

Required:

(a) Calculate the after-tax cost of debt for each of the two alternatives.

Briefly discuss any further factors that would need to be considered, other than the cost of debt, before choosing between these two alternatives.

(11 marks)

(b) Write a memorandum to the board, as a member of DDD plc's treasury department, which discusses the financing options for expansion put forward at the board meeting. In so doing, evaluate the comments of the Directors.

(14 marks)

(Total = 25 marks)

Question Four

FFF Ltd is a private company whose shares are owned by the Directors. It imports antique furniture from Scandinavia and either sells to retail customers through its own shops, or to wholesale customers, who are antique dealers.

Given the exclusive nature of the items, stock turnover is very slow, although profit margins can be high. The same types of items are generally sold to retail and to wholesale customers. However, while demand from retail customers is fairly constant all year, the demand from wholesale customers is much more volatile with unpredictable increases and decreases in the type of goods and quantities ordered.

The company's most recent accounting year end was 30 April 2003. There was an overdraft of £3 million at this date that currently carries an annual rate of interest of 8%. There is no other borrowing.

The following figures are taken from the financial statements for the year to 30 April 2003.

Costs

Administration and other operating overheads:	
Fixed	£1 million
Variable – retail	£2 million
Variable – wholesale	£2 million
Creditors' period (days):	
Operating costs	nil
Stock purchases	30 days
Stockholding period (days)	180 days

Revenues

	Retail	*Wholesale*
Turnover	£4·8 million	£7·2 million
Gross profit margin (% of sales)	60%	30%
Debtors' period (days)	nil	90 days

The Directors are concerned about the extent of the company's investment in working capital and wish to improve controls over working capital, but they do not want to damage relationships with its customers or suppliers.

The *Purchasing Director* summarised the situation:
"We have very heavy investment in working capital. Just look at stocks. I know the business we are in has a slow stock turnover but we have some very slow-moving items. We just do not have the information systems to identify and control this type of item. Even ignoring the very slow items, I am sure we can control working capital more efficiently. Although retail customers normally like to see the physical items before they order, we do not have to hold such large quantities of stock. Wholesale customers order through our catalogue anyway. They do not need to see the goods because they can return them to us if they are not sold."

The *Marketing Director* disagrees:
"The problem is that we will lose sales if retail customers cannot actually see the goods. Orders take at least 50 days to come from Scandinavia. They just will not wait that long. I know the suppliers do not charge us for transport costs on most large deliveries, but I cannot see why we cannot also have the same credit from our suppliers as we give to our wholesale customers. That would solve our working capital problems."

Required:

(a) Calculate the total operating profit of FFF Ltd for the year ended 30 April 2003 and the overall current ratio at that date. Assume a 365-day year.

Explain the usefulness of these calculations in the circumstances described. Identify any assumptions made.

(11 marks)

(b) As a consultant, write a memorandum to the board of FFF Ltd which evaluates its current working capital policy and considers possible improvements in its management of working capital.

(14 marks)

(Total = 25 marks)

Question Five

LLL is a listed company operating in the leisure industry. It has two divisions: the Casinos Division and the Golf Club Division. Each division is separately operated and has its own Managing Director.

The Casinos Division comprises 30 casinos, spread throughout the country in which it operates. Customers gamble on a range of games.

The Golf Club Division is made up of 20 golf clubs, where members play on high-quality courses, with clubhouse facilities including bars and restaurants. The clubs have private membership and members pay annual subscriptions.

The company is considering the cash management policy of each division and the problems are summarised by each of the Managing Directors.

Casinos Division:

"Our problem is that cash flow is very volatile and uncertain. It is the nature of the business that we do not know from one day to the next how much cash we will generate or how much we will lose. Customers come in with large amounts of cash. Often they lose, but sometimes they win large amounts. We therefore need to keep cash on hand in case it is one of the nights that the customers are winning, but we cannot know in advance when that will be, so most of the time we have far too much cash on hand. At the time of night we are open the banks are closed."

Golf Club Division:

"Our cash inflow is very uneven, but we know when it is coming in. Members pay their subscriptions on 1 January each year, and this is most of our income, so we have surplus cash in January that tends to decrease as the year passes by, until the year end when we normally have an overdraft. This is then cleared by the receipt of subscriptions in January. We do have other sources of income, such as receipts from the restaurant, bars and shops, but these are fairly even over the year. The costs of maintaining the golf courses is seasonal with the highest cost being in the summer when the need to maintain the greens and fairways is greatest."

Required:

As a member of LLL's treasury team, write a memorandum to the board which:

(a) evaluates the cash management problems facing each division, and in so doing highlights the key risks and potential costs being faced; and

(8 marks)

(b) analyses the ways in which cash management might be improved. Refer to appropriate cash management models where relevant.

(17 marks)

(Total = 25 marks)

Question Six

EQU plc is a listed company whose shares are mainly owned by large financial institutions. It currently owns and operates a theme park, called "Dragonland", in the south west of England. It covers five square kilometres and contains various rides, gardens and attractions. Customers pay a single entrance fee. The company's accounting year end is 31 July.

The land is leased and the other fixed assets give poor security, so the company is all equity financed. The venture has been successful and although it was considered risky initially, it has now stabilised, with a constant stream of customers and steady turnover, profitability and cash flows.

The Directors are now considering raising £8 million new finance to be used in full to open a second theme park in Scotland, called "Phoenixworld".

The total dividend to be paid by the company on 31 July 2003 will be £1·2 million. The company's shares are already quoted ex div.

The Board Meeting

At a board meeting some concerns were expressed:

The *Chairman* argued:
"If we want to carry on growing, we need to expand to other sites. I admit that there may be some difficulties in the early years but, basically, Phoenixworld is the same type of business as we have now so the risk should be no different. Therefore the company's cost of equity should not change from its current level, which I think should be about 12% per annum. This seems appropriate for stable earnings such as ours.

If we go ahead with Phoenixworld, I would expect us not to pay any more dividends after 31 July 2003 until 31 July 2006, at which time a total dividend of £2 million would be declared and this should then grow at 4% per annum indefinitely."

The *Chief Executive* disagreed:
"Of course Phoenixworld would be more risky. This is a new venture with new capital investment and a different customer base. Earnings are therefore bound to be more volatile. This means that the cost of equity will be higher. I think the cost of equity for the company would rise to 15% per annum if Phoenixworld goes ahead. Instead, we should stay at one site and invest £3 million in new rides and facilities to expand and increase profitability and dividends. This will be a lower risk option and will therefore generate a more certain dividend stream. The company's cost of equity should then stay at the current level of 12%.

If this option is taken, I would expect dividends to increase at 12% per annum from the current level (at 31 July 2003) up to, and including, the dividend on 31 July 2007. I would expect dividends in all future years thereafter to be constant at this level as we will reach the capacity of our site by that time."

Required:

(a) Using the dividend valuation model, calculate the total value of the share capital of EQU plc at 1 August 2003 if the Chairman's proposal to open Phoenixworld is accepted. This calculation should be carried out for each of the following assumptions:

(i) the Chairman's assumption that the company's annual cost of equity stays at 12%;

(ii) the Chief Executive's assumption that the company's annual cost of equity increases to 15%.

Comment on the differences in the two calculations.

(10 marks)

(b) Using the dividend valuation model, calculate the total value of the share capital of EQU plc at 1 August 2003 if the Chief Executive's proposal to expand Dragonland is accepted.

(4 marks)

(c) Discuss the possible forms of financing the proposed new projects and assess which form of finance is likely to be most appropriate for EQU plc. Describe how each financing method, and each of the projects may affect the company's cost of equity.

(11 marks)

Ignore taxation.

For simplicity, assume that dividends are declared and paid at each accounting year end.

(Total = 25 marks)

End of paper
