Performance Pillar

P3 – Performance Strategy

25 May 2011 – Wednesday Morning Session

Instructions to candidates

You are allowed three hours to answer this question paper.
You are allowed 20 minutes reading time **before the examination begins** during which you should read the question paper and, if you wish, highlight and/or make notes on the question paper. However, you will **not** be allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
You are strongly advised to carefully read ALL the question requirements before attempting the question concerned (that is all parts and/or sub-questions).
ALL answers must be written in the answer book. Answers written on the question paper will **not** be submitted for marking.
You should show all workings as marks are available for the method you use.
The pre-seen case study material is included in this question paper on pages 2 to 9. The unseen case study material, specific to this examination, is provided on pages 10 and 11.
Answer the compulsory question in Section A on page 13. This page is detachable for ease of reference
Answer TWO of the three questions in Section B on pages 16 to 21.
Maths tables and formulae are provided on pages 23 to 26.
The list of verbs as published in the syllabus is given for reference on page 27.
Write your candidate number, the paper number and examination subject title in the spaces provided on the front of the answer book. Also write your contact ID and name in the space provided in the right hand margin and seal to close.
Tick the appropriate boxes on the front of the answer book to indicate which questions you have answered.

P3 – Performance Strategy

TURN OVER

F plc

Pre-seen case study

Introduction

F plc is a food manufacturer based in the United Kingdom. It generates its revenue from three divisions named the Meals, Snacks and Desserts divisions. Each division specialises in the production of different types of food and operates from its own factory located on three different sites in England. F plc's head office is located in a remote part of England and is about equidistant from each of the company's three divisions.

Currently, F plc has a total employment establishment of about 10,000 full-time equivalent employees, about 97% of whom are employed in its three divisions. It is constantly running with about 700 full-time vacancies, mostly in the Desserts Division. This vacancy factor in the Desserts Division impedes its productivity.

The company was founded over 150 years ago by an entrepreneurial farmer who saw the opportunity to expand his farming business by vertically integrating into food production. Instead of selling his crops on the open market, he established a mill and produced flour. From this, it was a natural progression to diversify into producing other crops which were then processed into different ingredients for food products.

The company grew steadily and it became clear at the beginning of the 20th Century that increased production facilities were needed. It was at this point that the company built its first factory which at the time was a state of the art manufacturing facility. As demand continued to grow during the 20th Century, the company required additional manufacturing facilities and made a public offering of shares in 1960 to finance this expansion. The public offer was successful and F Limited was established. The original family's holding in the company fell to 25% at this point. Although a second factory was opened with the capital that had been raised, F Limited continued to manage the company on a centralised basis.

The next phase of development came in the late 1980's when F Limited became F plc. After this, F plc had a successful rights issue which raised sufficient capital to enable a third factory to be built. It was at this point that the divisionalised and de-centralised structure was established. Prior to this, the company managed its factories directly from its head office. The family shareholding fell to 20% at this point, with one family member holding 10% of the shares and family trusts holding the other 10%.

The environment in which F plc trades is dynamic, particularly with regard to the growth of legislation relating to food hygiene and production methods. F plc now exports many of its products as well as obtaining ingredients from foreign producers, which means that F plc must observe legislative requirements and food standard protocols in different countries.

Mission statement

F plc's mission statement, which was set in the year 2000, is as follows:

"F plc is committed to continually seek ways to increase its return to investors by expanding its share of both its domestic and overseas markets. It will achieve this by sourcing high quality ingredients, using efficient processes and maintaining the highest standards of hygiene in its production methods and paying fair prices for the goods and services it uses."

Strategic aims
The strategic aims are set in order to enable F plc to meet the obligations contained in its mission statement. F plc aims to:

(i) increase profitability of each of its divisions through increased market share in both domestic and overseas markets
(ii) source high quality ingredients to enhance product attractiveness
(iii) ensure that its factories adhere to the highest standards of food hygiene which guarantee the quality of its products
(iv) strive to be at the forefront in food manufacturing techniques by being innovative and increasing efficiency of production with least waste.

Corporate Social Responsibility
F plc takes Corporate Social Responsibility (CSR) seriously. The post of Environmental Effects Manager was created two years ago and a qualified environmental scientist was appointed to it. The Environmental Effects Manager reports directly to the Director of Operations. The role of the Environmental Effects Manager is to develop initiatives to reduce environmental impacts, capture data on the environmental effects of divisional and head office operations and report to the Board of Directors on the progress towards the achievement of F plc's CSR targets. An extract from F plc's internal CSR report for 2010 is shown in Appendix 1. F plc does not publish its CSR report externally.

Last year, F plc received criticism in the national press in England and in other countries for exploiting some of its suppliers in Africa by paying low prices for ingredients. This resulted in an extensive public relations campaign by F plc to counter these accusations. It established a programme to channel funds to support farmers in Africa via payments made through African government agencies. The programme, which is managed through F plc's head office, received initial financing from F plc itself and is now widening its remit to draw funding from other sources including public funding from the European Union.

The Board of Directors
The Board of Directors comprises five executive and five non-executive members all of whom are British. No member of the Board is from an ethnic minority.

The Chairman is a senior non-executive director and a retired Chief Executive of a major quoted retail clothing company based in England. He received a knighthood two years ago for services to industry.

The Chief Executive is 52 years old and was Director of Operations at F plc before taking up his current post three years ago.

The Finance Director is 49 years old and a qualified CIMA accountant. He has experience in a variety of manufacturing and retail organisations.

The Director of Operations is 65 years old and is a member of the original family which founded the business. He has been employed by F plc for all of his working life. He took up his current post three years ago following the promotion of the previous post holder to the role of Chief Executive.

The Marketing Director is 43 years old and has held various positions in sales and marketing for different organisations before being appointed to the Board. He came to the attention of the Chief Executive when he was instrumental in a successful initiative to market a new shopping complex in the city in which F plc's head office is based. At the time, the Marketing Director was the Chief Marketing Officer for the local government authority in the area.

The Director of Human Resources, the only female member of the Board, is 38 years old and holds a recognised HR professional qualification. Last year she was presented with a national award which recognised her achievements in the development of human resource management practices.

In addition there are four other non-executive directors on the Board. Two of them previously worked in senior positions alongside the Chairman when he was Chief Executive of the retail clothing company. One of them was the clothing company's finance director, but is now retired and the other was its marketing director but is now the sales and marketing director for a pharmaceutical company. One of the other non-executive directors is a practising lawyer and the other is a sports personality of national renown and a personal friend of the Chairman.

The Divisional General Managers, responsible for each of the three divisions, are not members of F plc's board. The Divisions are organised along traditional functional lines. Each division is managed by a Divisional Board which is headed by a Divisional General Manager. Each Divisional Board comprises the posts of Divisional Operations Manager, Divisional Accountant, Divisional Marketing Manager and Divisional Human Resources Manager. Each division undertakes its own marketing and human resource management. The divisional accountants are responsible for the management accounting functions within their divisions. Each member of the divisional boards is directly accountable to the Divisional General Manager but have professional accountability to the relevant functional F plc executive board members.

Financial position and borrowing facilities

Extracts from F plc's financial statements for the year ended 31 December 2010 are shown in Appendix 2.

F plc's long term borrowings are made up of a £160 million bank loan for capital expenditure and a £74 million revolving credit facility (RCF).

The bank loan is secured on F plc's assets and is repayable on 1 January 2018.

The RCF allows F plc to borrow, make repayments and then re-borrow over the term of the agreement. This provides F plc with flexibility because it can continue to obtain loans as long as it remains at or below £80 million, being the total amount agreed for this facility. The RCF expires on 31 December 2013.

Planning process

The planning process employed by F plc is one which can be described as adhering to classical rational principles. This has been the method of planning used for many years and culminates in the production of a five year forecast. The annual budget cycle feeds in to the strategic plan which is then updated on an annual basis. All F plc's revenue is derived through the operations of the three divisions. The only income generated by F plc's head office is from investments. The five year forecast for sales revenue and net operating profit for each division and F plc in total, after deduction of head office operating costs, is shown in Appendix 3. This shows that F plc is seeking to increase its sales revenue and net operating profit over the five year plan period.

Competition within the industry

F plc is one of the largest food production companies in England. It had an overall share of about 6% of its home market in 2010. Its nearest competitors held 5% and 7% market share respectively in 2010. The products in the industry have varying product life cycles. Competition is intense and there is a high failure rate for new products. Usually, new products require significant marketing support particularly if a new brand is being established.

Organisational culture within each division

Different cultures have emerged within each division.

Meals Division:

In the Meals Division, each function operates with little direct interference from the Divisional Board members. The approach is to allow each function to operate with as little control as possible being exercised by the Divisional Board.

Snacks Division:
In the Snacks Division, the emphasis of the Divisional Board is on product research and development and marketing. The Snacks Divisional Board expects its divisional marketing staff to undertake market research into customer tastes and preferences and then for products which satisfy these to be developed by its divisional research staff.

Desserts Division:
In the Desserts Division, the finance function is the dominant force. The finance functions in the other two divisions exert less influence over operations than is the case in the Desserts Division. It is not unusual for the Divisional Accountant in the Desserts Division to have confrontational meetings with managers of other functions. Such confrontation is particularly evident in the monthly meetings between the Divisional Accountant and the Divisional Marketing staff. It is clear that within the Desserts Division, the Divisional General Manager, a food technologist by profession, and the Divisional Accountant, formerly an auditor with a local government authority, maintain strict control over the operation of the division.

Further details relating to the three divisions are as follows:

Meals Division
The Meals division is located in the South of England. It specialises in manufacturing frozen meals, which are designed to be easy for consumers to quickly heat up and serve. The meals are sold to supermarkets and other retail outlets. Some are manufactured under F plc's own brand and others are manufactured under supermarkets' own labels. The division is also increasing its sales to welfare organisations which support elderly and infirm people. These organisations purchase simple frozen meals in bulk which they then heat up to provide a hot meal each day to those people in their care. In 2010, the Meals Division earned 14% of its revenue from outside the United Kingdom.

One of the Meals Division's most profitable products is a steak pie that is flavoured with special gravy that was developed by one of F plc's founding family members in the early part of the 20th Century. F plc's competitors cannot copy this gravy because the ingredients have to be combined in a very precise manner and then cooked in a particular way. The recipe for this gravy is known only to F plc's Director of Operations and the manager of the pie factory.

Two of the Meals Division's products are currently subject to investigation by the Food Standards Authority of a European country. Please see Appendix 1 under the heading "Food labelling" for more information on this.

Snacks Division
The Snacks Division, located in the East of England, mainly manufactures confectionery such as packet savouries and chocolate bars. Its main customers are supermarkets and retail shops. It has a growing market in continental Europe and in 2010 the division earned 19% of its revenue from non-United Kingdom sales. Many of its products are F plc's own brands, although, similarly with the Meals Division, it supplies products to supermarkets under their own label.

The Snacks Division successfully launched a new premium brand of chocolate bars in the UK in 2010.

Desserts Division
The Desserts Division is located in the North of England where road, rail and air links are not well developed. This has resulted in high transportation costs for goods into and out of the factory. Originally, this location was chosen because the lease terms for the factory were very competitive but in recent times the local taxes placed on the factory have become expensive. There is some limited room for expansion on the site the factory occupies but the local government authority has repeatedly rejected the expansion plans when the Division has sought the necessary planning permission to put its plans into action. This has caused the Divisional Board to consider whether it should move its entire operation to another part of England where its expansion plans may be more easily accomplished.

The Division has experienced technical and managerial staff shortages. The workforce of the Division has an establishment of 4,700 full-time equivalent employees. Despite there being a ready supply of manual labour for production work, the Desserts division runs with an average of 385 full-time vacancies at any one time.

The Division's products range from cold desserts, particularly ice cream, which can be eaten directly from the packaging, to those which require some preparation by the final purchaser before the product can be consumed. The Divisional Marketing Department has been investigating the possibility of negotiating 'Freezer deals' by which the Desserts Division would supply ice cream freezers to independent retailers which sell the Division's ice cream products. An independent retailer is a shop or outlet that is not part of a larger chain. This is in order to investigate the possibility of increasing the Division's share of the ice cream market sold by independent retailers.

The Division's sales increase in the periods which lead up to national and international festive periods such as Christmas and Chinese New Year. The Division is constantly researching new markets in an effort to increase its foreign earnings. Revenue from outside the United Kingdom in 2010 represented 23% of the Division's total revenue.

Inventory control and IT systems

There have been a number of problems across all three divisions in respect of inventory control. Poor inventory control has led to high levels of wastage and obsolete inventory being carried. This has been particularly problematic in respect of perishable ingredients. In the case of the Desserts Division, the Divisional Accountant has estimated that 5% of the Division's potential revenue has been lost as a result of not being able to satisfy customer orders on time, due to poor inventory control.

F plc operates a standard information management system across all the Divisions and at Head Office. The Information Technology in use has been unreliable due to technical malfunctions since the information management system was installed in 2001. Monthly management accounts, provided by each division to head office are often late, sometimes not being made available for up to three weeks into the subsequent month.

Internal audit

Until now, F plc's Internal Audit function, which is based at Head Office, has tended to concentrate its efforts on reviewing activities in the Meals and Snacks divisions as they each produce lower revenues and net operating profits in absolute terms compared with the Desserts division. The Internal Audit function's approach of applying a "light touch" to the Desserts Division is also in recognition of the influence exerted by the Divisional Finance function over the Division's operational activities.

Strategic development

The Board of Directors is now midway through its strategic planning cycle and is considering how the company should move forward. There is a proposal to build and operate a factory in West Africa to reduce air kilometres being flown in supplying the Meals Division with fresh vegetables. It is intended that the African factory will freeze the vegetables and then transport them to the Meals Division's factory in England by refrigerated ship.

Extracts from F plc's internal Corporate Social Responsibility report for the year ended 31 December 2010.

This report was produced by the Environmental Effects Manager and presented to the Board of F plc in February 2011.

Fair trading
In accordance with its mission statement, F plc is committed to paying a fair price for the ingredients it uses in its products, particularly to farmers in the less developed economies of the world.

Waste reduction and recycling
F plc set a target for the financial year 2010 that waste of ingredients should be cut by 2%, measured by weight, from the 2009 levels. The actual ingredient waste was 2.5% lower in 2010 than in 2009 as measured by weight.

A target was also set for F plc to recycle 90% of its used packaging in the year 2010. It was recorded that 85% of packaging in 2010 was actually recycled.

Food labelling
Legal requirements demand accuracy in food labelling, in respect of ingredients, product description and cooking instructions in many countries. F plc employs a Compliance Manager to ensure that relevant labelling laws in each country, with which the company trades, are adhered to. A target is set for F plc to justify 100% of its claims in food labelling. Two products manufactured in the Meals Division are currently undergoing investigations by the Food Standards Authority of a European country following allegations that the labelling is inaccurate.

(Update: Eight elderly people were admitted to hospital in February 2011 with suspected food poisoning after eating one of the packaged meal products which is under investigation by the Food Standards Authority.)

Transportation
Following adverse press coverage relating to the high number of kilometres travelled when importing and exporting goods from and to overseas countries, F plc introduced a target that its use of air travel should be reduced by 10% in 2010 compared with the amount used in 2009. F plc fell short of its target by only reducing air kilometres travelled by 3% in 2010 compared with 2009. Road kilometres travelled increased by 5% in 2010 compared with 2009.

Efficiency of energy usage in production
In an effort to reduce carbon emissions from the three divisions and head office, a target was set that by 2015, F plc will become carbon neutral in terms of its usage of energy. Energy usage in 2010 was at the same level as 2009. It has been proposed that energy efficient lighting should replace the current energy inefficient lighting at all three factories and at head office in 2011 and smart meters should be installed in all of F plc's premises to keep the waste of electricity to a minimum.

Extracts from F plc's income statement and statement of financial position

Income statement for the year ended 31 December 2010

	£ million (GBP million)
Revenue	986
Operating costs	(938)
Net operating profit	48
Interest income	1
Finance costs	(16)
Corporate income tax	(10)
PROFIT FOR THE YEAR	23

Statement of financial position as at 31 December 2010

	Notes	*£ million (GBP million)*
ASSETS		
Non-current assets		465
Current assets		
Inventories		90
Trade and other receivables		112
Cash and cash equivalents		20
Total current assets		222
Total assets		687
EQUITY AND LIABILITIES		
Equity		
Share capital	1	140
Share premium		40
Retained earnings		61
Total equity		241
Non-current liabilities		
Long term borrowings	2	234
Current liabilities		
Trade and other payables		212
Total liabilities		446
Total equity and liabilities		687

Notes:

1. There are 560 million ordinary shares of £0.25 each in issue.
2. The long term borrowings comprise £160 million loan for capital expenditure which is repayable on 1 January 2018 and a £74 million revolving credit facility which expires on 31 December 2013.

APPENDIX 3

Five year forecast of sales revenue and net operating profit for each division and F plc in total and operating costs for head office

All figures are shown in £ million (GBP million)

	2010 (Actual)	*2011*	*2012*	*2013*	*2014*	*2015*
Meals Division						
Sales revenue	266	287	310	335	362	391
Net operating profit	31	34	40	47	54	63
Snacks Division						
Sales revenue	176	194	213	234	258	283
Net operating profit	44	48	53	58	64	71
Desserts Division						
Sales revenue	544	571	600	630	661	694
Net operating profit	72	80	90	101	112	125
Head office						
Operating costs	(99)	(107)	(112)	(118)	(124)	(130)
F plc total						
Sales revenue	986	1,052	1,123	1,199	1,281	1,368
Net operating profit	48	55	71	88	106	129

End of Pre-seen Material

SECTION A – 50 MARKS

[You are advised to spend no longer than 90 minutes on this question.]

ANSWER THIS QUESTION. THE QUESTION REQUIREMENTS ARE ON PAGE 13, WHICH IS DETACHABLE FOR EASE OF REFERENCE

Question One

Unseen case material

Meals Division

The sale of pre-packaged oven-ready meals to charities and government-funded organisations generates 15% of the revenue of the Meals Division. The Division produces a range of frozen meals that are designed to meet the nutritional requirements of elderly and infirm people. The meals are packaged so that they can be cooked in bulk in catering ovens before being delivered as ready to eat meals to the homes of the elderly and infirm.

The Meals Division sells a large quantity of these meals and enjoys significant economies of scale. Consequently, even though the selling price of these meals is much lower than any other products, this is a very profitable business segment.

Unfortunately, the Meals Division suffered a significant setback in February 2011. A charity that works with elderly people received complaints that several cases of severe food poisoning had occurred. Eight of the victims were so ill that they had to be admitted to hospital for emergency treatment. Samples of the frozen meals remaining in the charity's freezer, all of which had been supplied by the Meals Division, were sent to an independent laboratory for analysis. It was discovered that they were contaminated by bacteria that can cause severe abdominal illness.

The Meals Division conducted its own analysis of the meals purchased by the charity. The presence of the bacteria was confirmed, but it was found to be a common organism that is present in almost all meat. If the charity had cooked the frozen meals in accordance with the instructions printed on the packaging then the bacteria would have been killed and the consumers would not have been harmed in any way. Furthermore, the contamination was only very slight. A healthy person who ate a meal containing small quantities of these bacteria would not become ill because of the body's immune system.

This case has been reported widely in newspapers and on television. F plc's directors have asked for an analysis of the risks to the company's reputation. The Meals Division's management team has recommended that F plc's defence should be based on the following two arguments:

- All meat products contain these bacteria. Those manufactured by F plc contain a lower concentration than the industry average and comply with all relevant hygiene regulations.
- The frozen meals supplied by the Meals Division should not have caused any harm unless they had been prepared negligently by the charity. The charity should be blamed for the food poisoning and not F plc.

Secret recipe

One of F plc's most popular and profitable products is a steak pie that is flavoured with a special gravy that was developed by one of F plc's founding family members in the early part of the 20th Century. The gravy is manufactured using a very specific mixture of herbs and spices. F plc's competitors cannot copy this mixture because the ingredients have to be combined in a very precise manner and then cooked in a particular way.

The recipe for this herb and spice mix is known only to F plc's Director of Operations and the manager of the pie factory. There is no written record anywhere. The factory manager has worked for F plc for more than 30 years and he is a trusted member of staff. Twice a year, the director and the manager of the pie factory close part of the factory to all other staff and the two of them make sufficient quantity of the mix to last for the next six months.

The factory manager was recently offered a job by one of F plc's largest rivals. The job would double the factory manager's salary and he would be guaranteed the opportunity to retire on full pay within two years of taking up the post. He declined this offer and informed the Director of Operations that he received this approach.

The chief executive of F plc is concerned that a competitor could have acquired the factory manager's knowledge of the recipe in such an easy and inexpensive manner. He is also concerned that F plc does not have a record, other than the memories of two senior members of staff. He has asked for recommendations on the most appropriate way to secure this knowledge.

Internal audit

The external auditor has noted concerns expressed by the management accountant in the Desserts Division concerning weaknesses in the IT system associated with inventory and the relative lack of attention paid to the division by the internal audit department. The partner in charge of the external audit has held a meeting with the finance director and has requested that the internal audit department investigates the concerns voiced by the management accountant.

The head of internal audit has responded that it is inappropriate for the divisional management accountant to comment on the allocation of internal audit resources and that the external auditor should offer to cooperate more fully with internal audit before making such requests.

F plc currency risks

Most of F plc's sales are to customers in the United Kingdom. F plc imports many of the ingredients that it uses from a variety of countries. The vast majority of F plc's foreign suppliers insist on invoicing F plc in their own currency and it has proved impossible to insist on paying for imported ingredients in British Pounds.

The board of F plc has always refused to devote any attention to the currency risks associated with importing. It has always absorbed minor fluctuations by taking a slightly larger or smaller profit on sales. Larger fluctuations have been passed on to customers in the form of increased or decreased selling prices. Certain members of the board have always argued that F plc's competitors are subject to the same currency risks and so the market will always be forced to accept the impact of currency movements, in which case there is very little point in taking active steps to manage currency risks.

The requirement for Question One is on page 13

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Required:

(a)

(i) **Evaluate** the risks arising from the outbreak of food poisoning to F plc's reputation in terms of their likelihood and impact of occurrence.

(8 marks)

(ii) **Advise** the directors of F plc on the suitability of the two arguments proposed by the managers of the Meals Division for defending the company's reputation.

(8 marks)

(b)

(i) **Advise** the board on the implications of the secret recipe being obtained by a competitor.

(4 marks)

(ii) **Recommend**, stating reasons, suitable precautions for preventing the recipe from being obtained by a competitor.

(6 marks)

(c)

(i) **Evaluate** the head of internal audit's statement that the divisional management accountant should not comment on the allocation of internal audit resources.

(6 marks)

(ii) **Discuss** the validity of the head of internal audit's assertion that the external auditor should be prepared to cooperate with the internal audit department.

(6 marks)

(d) **Evaluate** the views of certain board members concerning there being no need to manage F plc's currency risks.

(12 marks)

(Total for Question One = 50 marks)

(Total for Section A = 50 marks)

TURN OVER

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SECTION B – 50 MARKS

[You are advised to spend no longer than 45 minutes on each question in this section.]

ANSWER *TWO* OF THE THREE QUESTIONS

Question Two

C is a partnership that offers a range of consultancy services involving structural engineering. The firm specialises in examining plans prepared by architects to ensure that the buildings being planned are structurally sound. This requires careful consideration of the design and the materials being used to ensure that the resulting building will be stable and can withstand the effects of the wind and other forces of nature. C specialises in major contracts and the firm often advises on complex designs that use innovative building techniques.

C has a reputation for having a competitive culture. The firm offers salaries that are much higher than the industry average. There is an "up or out" culture which means that qualified staff must demonstrate the potential to be promoted to the next level of seniority within a relatively short period or they will be encouraged to leave.

C has 45 partners, all of whom are qualified structural engineers, and approximately 400 professional staff. C's professional staff comprises engineers at different stages in their careers, ranging from team leaders to junior trainees. The team leaders are all experienced engineers who are eligible for promotion to partnership in the event that a vacancy arises. Selection for partnership depends on the ability to consistently complete assignments to a high standard and within budget.

Trainee engineers are appointed on a three year contract, during which time they are expected to pass their professional exams. C takes on approximately 50 trainees every year. Those trainees who demonstrate the necessary qualities to succeed in C are offered the opportunity to stay with the firm at the conclusion of their training contracts. Those who do not receive such an offer must leave.

Each partner is responsible for a portfolio of assignments, and each portfolio is accounted for as a profit centre. Partners are expected to be aware of the opportunities to bid for assignments and to win new business despite competition from other engineering firms. C has a reputation for bidding aggressively and accepting tight deadlines. Each partner is responsible for a portfolio of assignments, each of which will involve a team leader and several assistants. Professional staff time is charged to assignments on an absorption costing basis and the firm’s time recording system calculates a notional profit for each assignment based on the cost of time charged against the fee generated.

At the end of every financial year each partner receives an equal share of the firm’s annual profit, but it is a matter of pride for each partner to generate more profit for the firm than he or she receives from the annual profit share.

All partners enjoy equal seniority and major strategic decisions are decided by a simple majority vote of the partnership. The firm is managed on a day to day basis by a management committee which comprises three partners. Every partner is expected to take a turn as a member of the management committee at some stage in his or her career. One person joins the committee every year to take over from the committee member whose term of office has expired. The third year of service on the management committee is spent as the firm’s managing partner. There is no additional reward for serving on the management committee, but during that year the committee members are not expected to be responsible for a full complement of assignments and the managing partner is not expected to be responsible for any assignments.

Required

(a) **Evaluate** the risks to the quality of service offered to C's clients arising from the competitive nature of the firm's culture.

(12 marks)

(b) **Evaluate** the strengths and weaknesses of C's governance arrangements with respect to the partnership and its management committee.

(13 marks)

(Total for Question Two = 25 marks)

Section B continues on the next page

TURN OVER

Question Three

G is a large retail organisation that imports goods from the US for sale in its home market, where the currency is the R$.

The directors of G are aware that the company is subject to significant economic exposure to movements on the US$ because any appreciation of the US$ will increase the cost of goods for resale. G has attempted to create a partial hedge against this by placing all of its cash reserves in a US$ bank account. That way the losses associated with any increase in cost prices will be partially offset by a gain on the bank account.

The directors are concerned that the translation gains and losses on the US$ bank balance are visible to shareholders, whereas the offsetting of economic exposure is not and so their hedging policy may be misunderstood.

The US bank account has a balance of US$30m. The exchange rate is presently R$3 to US$1. The daily standard deviation of the balance when it is translated to R$ is R$450,000.

Required:

(a) **Advise** the directors on the matters that they would have to consider in order to determine the extent of G's economic exposure.

(5 marks)

(b) **Evaluate** the validity of the directors' concern that "*the translation gains and losses on the US$ bank balance are visible to shareholders, whereas the offsetting of economic exposure is not and so their hedging policy may be misunderstood*".

(10 marks)

(c)

(i) **Calculate** the 95% daily value at risk (VaR) of G's US$ bank balance.

(3 marks)

(ii) Use your answer to (c)(i) to **calculate** the 95% 30 day VaR of G's US$ bank balance.

(2 marks)

(iii) **Advise** the directors on the relevance of the VaR statistic to their consideration of the risks associated with retaining this US$ bank balance.

(5 marks)

(Total for Question Three = 25 marks)

Section B continues on page 20

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TURN OVER

Question Four

A large college has several sites and employs hundreds of teaching staff. The college has recently discovered a serious fraud involving false billings for part-time teaching.

The fraud involved two members of staff. M is a clerk in the payroll office who is responsible for processing payments to part-time teaching staff. P is the head of the Business Studies department at the N campus. Part-time lecturers are required to complete a monthly claim form which lists the classes taught and the total hours claimed. These forms must be signed by their head of department, who sends all signed forms to M. M checks that the class codes on the claim forms are valid, that hours have been budgeted for those classes and inputs the information into the college's payroll package.

The college has a separate personnel department that is responsible for maintaining all personnel files. Additions to the payroll must be made by a supervisor in the personnel office. The payroll package is programmed to reject any claims for payment to employees whose personnel files are not present in the system.

M had gained access to the personnel department supervisor's office by asking the college security officer for the loan of a pass key because he had forgotten the key to his own office. M knew that the office would be unoccupied that day because the supervisor was attending a wedding. M logged onto the supervisor's computer terminal by guessing her password, which turned out to be the registration number of the supervisor's car. M then added a fictitious part-time employee, who was allocated to the N campus Business Studies department.

P then began making claims on behalf of the fictitious staff member and submitting them to M. M signed off the forms and input them as normal. The claims resulted in a steady series of payments to a bank account that had been opened by P. The proceeds of the fraud were shared equally between M and P.

The fraud was only discovered when the college wrote to every member of staff with a formal invitation to the college's centenary celebration. The letter addressed to the fictitious lecturer was returned as undeliverable and the personnel department became suspicious when they tried to contact this person in order to update his contact details. By then M and P had been claiming for non-existent teaching for three years.

The government department responsible for funding the college conducted an investigation and concluded that the college's management had relied excessively on the application controls programmed into administrative software and had paid too little attention to the human resources aspects of the system.

Required:

(a) **Evaluate** the difficulties associated with preventing and/or detecting this fraud.

(10 marks)

(b) **Advise** the college on the weaknesses in its systems and procedures.

(8 marks)

(c) **Discuss** the suggestion that the human elements of control systems are frequently more important than the software elements in ensuring that records are correct.

(7 marks)

(Total for Question Four = 25 marks)

(Total for Section B = 50 marks)

End of Question Paper

Maths tables and formulae are on pages 23 to 26

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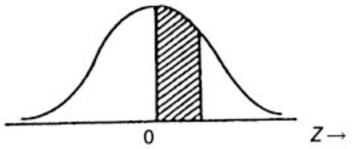
AREA UNDER THE NORMAL CURVE

This table gives the area under the normal curve between the mean and a point Z standard deviations above the mean. The corresponding area for deviations below the mean can be found by symmetry.



$Z = \frac{(x-\mu)}{\sigma}$	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.0	.0000	.0040	.0080	.0120	.0159	.0199	.0239	.0279	.0319	.0359
0.1	.0398	.0438	.0478	.0517	.0557	.0596	.0636	.0675	.0714	.0753
0.2	.0793	.0832	.0871	.0910	.0948	.0987	.1026	.1064	.1103	.1141
0.3	.1179	.1217	.1255	.1293	.1331	.1368	.1406	.1443	.1480	.1517
0.4	.1554	.1591	.1628	.1664	.1700	.1736	.1772	.1808	.1844	.1879
0.5	.1915	.1950	.1985	.2019	.2054	.2088	.2123	.2157	.2190	.2224
0.6	.2257	.2291	.2324	.2357	.2389	.2422	.2454	.2486	.2518	.2549
0.7	.2580	.2611	.2642	.2673	.2704	.2734	.2764	.2794	.2823	.2852
0.8	.2881	.2910	.2939	.2967	.2995	.3023	.3051	.3078	.3106	.3133
0.9	.3159	.3186	.3212	.3238	.3264	.3289	.3315	.3340	.3365	.3389
1.0	.3413	.3438	.3461	.3485	.3508	.3531	.3554	.3577	.3599	.3621
1.1	.3643	.3665	.3686	.3708	.3729	.3749	.3770	.3790	.3810	.3830
1.2	.3849	.3869	.3888	.3907	.3925	.3944	.3962	.3980	.3997	.4015
1.3	.4032	.4049	.4066	.4082	.4099	.4115	.4131	.4147	.4162	.4177
1.4	.4192	.4207	.4222	.4236	.4251	.4265	.4279	.4292	.4306	.4319
1.5	.4332	.4345	.4357	.4370	.4382	.4394	.4406	.4418	.4430	.4441
1.6	.4452	.4463	.4474	.4485	.4495	.4505	.4515	.4525	.4535	.4545
1.7	.4554	.4564	.4573	.4582	.4591	.4599	.4608	.4616	.4625	.4633
1.8	.4641	.4649	.4656	.4664	.4671	.4678	.4686	.4693	.4699	.4706
1.9	.4713	.4719	.4726	.4732	.4738	.4744	.4750	.4756	.4762	.4767
2.0	.4772	.4778	.4783	.4788	.4793	.4798	.4803	.4808	.4812	.4817
2.1	.4821	.4826	.4830	.4834	.4838	.4842	.4846	.4850	.4854	.4857
2.2	.4861	.4865	.4868	.4871	.4875	.4878	.4881	.4884	.4887	.4890
2.3	.4893	.4896	.4898	.4901	.4904	.4906	.4909	.4911	.4913	.4916
2.4	.4918	.4920	.4922	.4925	.4927	.4929	.4931	.4932	.4934	.4936
2.5	.4938	.4940	.4941	.4943	.4945	.4946	.4948	.4949	.4951	.4952
2.6	.4953	.4955	.4956	.4957	.4959	.4960	.4961	.4962	.4963	.4964
2.7	.4965	.4966	.4967	.4968	.4969	.4970	.4971	.4972	.4973	.4974
2.8	.4974	.4975	.4976	.4977	.4977	.4978	.4979	.4980	.4980	.4981
2.9	.4981	.4982	.4983	.4983	.4984	.4984	.4985	.4985	.4986	.4986
3.0	**.49865**	.4987	.4987	.4988	.4988	.4989	.4989	.4989	,4990	,4990
3.1	**.49903**	.4991	.4991	.4991	.4992	.4992	.4992	.4992	.4993	.4993
3.2	**.49931**	.4993	.4994	.4994	.4994	.4994	.4994	.4995	.4995	.4995
3.3	**.49952**	.4995	.4995	.4996	.4996	.4996	.4996	.4996	.4996	.4997
3.4	**.49966**	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4997	.4998
3.5	**.49977**									

PRESENT VALUE TABLE

Present value of $1, that is $(1+r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods	Interest rates (*r*)									
(*n*)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods	Interest rates (*r*)									
(*n*)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of \$1 per annum, Receivable or Payable at the end of each year for *n* years $\frac{1-(1+r)^{-n}}{r}$

Periods	Interest rates (*r*)									
(*n*)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods	Interest rates (*r*)									
(*n*)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	7.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

Formulae

Annuity

Present value of an annuity of £1 per annum receivable or payable for *n* years, commencing in one year, discounted at *r*% per annum:

$$PV = \frac{1}{r}\left[1 - \frac{1}{[1+r]^n}\right]$$

Perpetuity

Present value of £1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at *r*% per annum:

$$PV = \frac{1}{r}$$

Growing Perpetuity

Present value of £1 per annum, receivable or payable, commencing in one year, growing in perpetuity at a constant rate of *g*% per annum, discounted at *r*% per annum:

$$PV = \frac{1}{r-g}$$

LIST OF VERBS USED IN THE QUESTION REQUIREMENTS

A list of the learning objectives and verbs that appear in the syllabus and in the question requirements for each question in this paper.

It is important that you answer the question according to the definition of the verb.

LEARNING OBJECTIVE	VERBS USED	DEFINITION
Level 1 - KNOWLEDGE		
What you are expected to know.	List	Make a list of
	State	Express, fully or clearly, the details/facts of
	Define	Give the exact meaning of
Level 2 - COMPREHENSION		
What you are expected to understand.	Describe	Communicate the key features
	Distinguish	Highlight the differences between
	Explain	Make clear or intelligible/State the meaning or purpose of
	Identify	Recognise, establish or select after consideration
	Illustrate	Use an example to describe or explain something
Level 3 - APPLICATION		
How you are expected to apply your knowledge.	Apply	Put to practical use
	Calculate/compute	Ascertain or reckon mathematically
	Demonstrate	Prove with certainty or to exhibit by practical means
	Prepare	Make or get ready for use
	Reconcile	Make or prove consistent/compatible
	Solve	Find an answer to
	Tabulate	Arrange in a table
Level 4 - ANALYSIS		
How are you expected to analyse the detail of what you have learned.	Analyse	Examine in detail the structure of
	Categorise	Place into a defined class or division
	Compare and contrast	Show the similarities and/or differences between
	Construct	Build up or compile
	Discuss	Examine in detail by argument
	Interpret	Translate into intelligible or familiar terms
	Prioritise	Place in order of priority or sequence for action
	Produce	Create or bring into existence
Level 5 - EVALUATION		
How are you expected to use your learning to evaluate, make decisions or recommendations.	Advise	Counsel, inform or notify
	Evaluate	Appraise or assess the value of
	Recommend	Advise on a course of action

Performance Pillar

Strategic Level Paper

P3 – Performance Strategy

May 2011

Wednesday Morning Session