Enterprise Pillar

E3 – Enterprise Strategy

25 May 2010 – Tuesday 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 6. The unseen case study material, specific to this examination, is provided on pages 8 and 9.
Answer the compulsory questions in Section A on page 11. This page is detachable for ease of reference.
Answer TWO of the three questions in Section B on pages 14 to 17.
Maths Tables and formulae are provided on pages 19 and 20.
The list of verbs as published in the syllabus is given for reference on the inside back cover of this question paper.
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 the questions you have answered.

E3 – Enterprise Strategy

TURN OVER

Aybe

Pre-seen Case Study

Background

Aybe, located in Country C, was formed by the merger of two companies in 2001. It is a listed company which manufactures, markets and distributes a large range of components throughout Europe and the United States of America. Aybe employs approximately 700 people at its three factories in Eastern Europe and supplies products to over 0·5 million customers in 20 countries. Aybe holds stocks of about 100,000 different electronic components.

Aybe is regarded within its industry as being a well-established business. Company Ay had operated successfully for nearly 17 years before its merger with Company Be. Company Ay can therefore trace its history back for 25 years which is a long time in the fast moving electronic component business.

The company is organised into three divisions, the Domestic Electronic Components division (DEC), the Industrial Electronic Components division (IEC) and the Specialist Components division (SC). The Domestic and Industrial Electronic Components divisions supply standard electronic components for domestic and industrial use whereas the Specialist Components division supplies components which are often unique and made to specific customer requirements. Each of the three divisions has its own factory in Country C.

Composition of the Board of Directors

The Board of Directors has three executive directors, the Company Secretary and five non-executive directors. The Chairman is one of the five independent non-executive directors. The executive directors are the Chief Executive, Finance Director and Director of Operations. There is also an Audit Committee, a Remuneration Committee and a Nominations Committee. All three committees are made up entirely of the non-executive directors.

Organisational structure

Aybe is organised along traditional functional/unitary lines. The Board considers continuity to be a very important value. The present structure was established by Company Ay in 1990 and continued after the merger with Company Be. Many of Aybe’s competitors have carried out structural reorganisations since then. In 2008, Aybe commissioned a review of its organisational structure from a human resource consultancy. The consultants suggested alternative structures which they thought Aybe could employ to its advantage. However, Aybe’s Board felt that continuity was more important and no change to the organisational structure took place.

Product and service delivery

Customers are increasingly seeking assistance from their component suppliers with the design of their products and the associated manufacturing and assembly processes. Aybe’s Board views this as a growth area. The Board has recognised that Aybe needs to develop web-based services and tools which can be accessed by customers. The traditional method of listing the company’s range of components in a catalogue is becoming less effective because customers are increasingly seeking specially designed custom made components as the electronics industry becomes more sophisticated.

Financial data
Aybe's historical financial record, denominated in C's currency of C$, over the last five years is shown below.

	Year ended 31 December:				
	2009	2008	2007	2006	2005
	C$m	C$m	C$m	C$m	C$m
Revenue	620	600	475	433	360
Operating profit	41	39	35	20	13
Profit for the year	23	21	16	9	5
Earnings per share (C$)	0·128	0·117	0·089	0·050	0·028
Dividend per share (C$)	0·064	0·058	0	0	0

Extracts from the 2009 financial statements are given at Appendix A. There are currently 180 million ordinary shares in issue with a nominal value of C$0·10 each. The share price at 31 December 2009 was C$0·64. No dividend was paid in the three years 2005 to 2007 due to losses sustained in the first few years after the merger in 2001.

Aybe's bank has imposed an overdraft limit of C$10 million and two covenants: (i) that its interest cover must not fall below 5 and (ii) its ratio of non-current liabilities to equity must not increase beyond 0·75:1. Aybe's Finance Director is comfortable with this overdraft limit and the two covenants.

The ordinary shareholding of Aybe is broken down as follows:

	Percentage of ordinary shares held at 31 December 2009
Institutional investors	55
Executive Directors and Company Secretary	10
Employees	5
Individual investors	30

The Executive Directors, Company Secretary and other senior managers are entitled to take part in an Executive Share Option Scheme offered by Aybe.

Performance Review
Aybe's three divisions have been profitable throughout the last five years. The revenue and operating profit of the three divisions of Aybe for 2009 were as follows:

	DEC Division	*IEC Division*	*SC Division*
	C$m	*C$m*	*C$m*
Revenue	212	284	124
Operating profit	14	16	11

Financial objectives of Aybe
The Board has generally taken a cautious approach to providing strategic direction for the company. Most board members feel that this has been appropriate because the company was unprofitable for the three year period after the merger and needed to be turned around. Also, most board members think a cautious approach has been justified given the constrained economic circumstances which have affected Aybe's markets since 2008. While shareholders have been disappointed with Aybe's performance over the last five years, they have remained loyal and supported the Board in its attempts to move the company into profit. The institutional shareholders however are now looking for increased growth and profitability.

TURN OVER

The Board has set the following financial objectives which it considers reflect the caution for which Aybe is well known:

(i) Dividend payout to remain at 50% of profit for the year;
(ii) No further equity shares to be issued over the next five years in order to avoid diluting earnings per share.

Capital budget overspends
Aybe has an internal audit department. The Chief Internal Auditor, who leads this department, reports directly to the Finance Director. Investigation by the Internal Audit department has revealed that managers with responsibility for capital expenditure have often paid little attention to expenditure authorisation levels approved by the Board. They have justified overspending on the grounds that the original budgets were inadequate and in order not to jeopardise the capital projects, the overspends were necessary.

An example of this was the building of an extension to the main factory at the DEC division that was completed in 2009 at a final cost of nearly C$3 million which was almost 50% over budget. The capital budget for the extension was set at the outset and the capital investment appraisal showed a positive net present value. It subsequently became apparent that the site clearance costs and on-going construction expenditure were under-estimated. These estimates were provided by a qualified quantity surveyor who was a contractor to Aybe. The estimates supplied by the quantity surveyor were accurately included in Aybe's capital investment appraisal system which was performed on a spreadsheet. However, no regular checks were carried out to compare the phased budgeted expenditure with actual costs incurred. It came as a surprise to the Board when the Finance Director finally produced the capital expenditure project report which showed the cost of the extension was nearly 50% overspent.

Strategic development
Aybe applies a traditional rational model in carrying out its strategic planning process. This encompasses an annual exercise to review the previous plan, creation of a revenue and capital budget for the next five years and instruction to managers within Aybe to maintain their expenditure within the budget limits approved by the Board.

Debates have taken place within the Board regarding the strategic direction in which Aybe should move. Most board members are generally satisfied that Aybe has been turned around over the last five years and were pleased that the company increased its profit in 2009 even though the global economy slowed down. Aybe benefited from a number of long-term contractual arrangements with customers throughout 2009 which were agreed in previous years. However, many of these are not being renewed due to the current economic climate.

The Board stated in its annual report, published in March 2010, that the overall strategic aim of the company is to:

"Achieve growth and increase shareholder returns by continuing to produce and distribute high quality electronic components and develop our international presence through expansion into new overseas markets."

Aybe's Chief Executive said in the annual report that the strategic aim is clear and straightforward. He said "Aybe will strive to maintain its share of the electronic development, operational, maintenance and repair markets in which it is engaged. This is despite the global economic difficulties which Aybe, along with its competitors, has faced since 2008. Aybe will continue to apply the highest ethical standards in its business activities."

In order to facilitate the achievement of the strategic aim, Aybe's Board has established the following strategic goals:

1. Enhance the provision of products and services which are demanded by customers;
2. Invest in engineering and web-based support for customers;
3. Maintain the search for environmentally friendly products;
4. Pursue options for expansion into new overseas markets.

The Board has also stated that Aybe is a responsible corporate organisation and recognises the social and environmental effects of its operational activities.

Concern over the rate of growth
Aybe's recently appointed Director of Operations and one of its Non-Executive Directors have privately expressed their concern to the Chief Executive at what they perceive to be the very slow growth of the company. While they accept that shareholder expectations should not be raised too high, they feel that the Board is not providing sufficient impetus to move the company forward. They fear that the results for 2010 will be worse than for 2009. They think that Aybe should be much more ambitious and fear that the institutional shareholders in particular, will not remain patient if Aybe does not create stronger earnings growth than has previously been achieved.

Development approaches
The Board has discussed different ways of expanding overseas in order to meet the overall strategic aim. It has, in the past, been reluctant to move from the current approach of exporting components. However the Director of Operations has now begun preparing a plan for the IEC division to open up a trading company in Asia. The DEC division is also establishing a subsidiary in Africa.

TURN OVER

APPENDIX A

Extracts of Aybe's Income Statement and Statement of Financial Position

Income statement for the year ended 31 December 2009

	2009
	C$million
Revenue	620
Operating costs	(579)
Finance costs	(4)
Profit before tax	37
Income tax expense	(14)
PROFIT FOR THE YEAR	23

Statement of financial position as at 31 December 2009

	2009
	C$million
ASSETS	
Non-current assets	111
Current assets	
Inventories	40
Trade and other receivables	81
Cash and cash equivalents	3
Total current assets	124
Total assets	235
EQUITY AND LIABILITIES	
Equity	
Share capital	18
Share premium	9
Other reserves	8
Retained earnings	75
Total equity	110
Non-current liabilities	
Bank loan (8% interest, repayable 2015)	40
Current liabilities	
Trade and other payables	73
Current tax payable	8
Bank overdraft	4
Total current liabilities	85
Total liabilities	125
Total equity and liabilities	235

End of Pre-seen Material
The unseen material begins on page 8

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SECTION A – 50 MARKS

[the indicative time for answering this section is 90 minutes]

ANSWER THIS QUESTION

Question One

Unseen material for Case Study

The business environment in Asia
Aybe has taken advice from a number of expert sources about market prospects in Asia. The research concluded Asian markets have excellent potential for growth and profitability, because of increasing industrialisation, for one of Aybe's divisions, IEC. The markets are fast-moving and highly adaptive. Some countries in Asia are highly entrepreneurial whilst in others there is much involvement of the State in business. In some countries there is a mixed economy. In general, Asia encourages free markets but this is also allied to a requirement in some countries for local involvement in any business enterprise. Most Asian countries make extensive use of sophisticated information systems and information technology. A considerable amount of outsourcing from Western countries has taken place to Asia's benefit. Although this had originally been in areas of manufacturing, outsourcing has now developed extensively and many service and administrative functions have also been outsourced to Asia. All of these influences have led to a variety of organisational structures in Asian business.

Director of Operations
Aybe is organised along traditional functional lines and one of the most important departments is 'Operations'. The director with responsibility for this department is the Director of Operations. The Director of Operations had recently joined Aybe and one of the reasons for his appointment was his experience in managing the electronics division of a multinational company in China. He is very energetic and ambitious and had been supported in his appointment at Aybe by the Non-Executive Director (NED) who chairs the Nominations Committee. This NED considers that the Director of Operations has the potential to become the Chief Executive Officer (CEO) of Aybe within the next five years.

Expansion of electronic components business into Asia
Prior to 2010, the IEC division of Aybe had carried out a limited amount of business in Asia. The results of this business are shown in the column 'Actual 2009'.

Aybe's Management Accountant has prepared a forecast for the period 31 December 2010 to 2014 which shows the incremental effects of expansion into Asia of products from the IEC division. Aybe has been fortunate in that the Asian government in the country where it intends to trade has granted a tax 'holiday' for eight years to new overseas businesses. This means that Aybe's operations will not be liable to tax. Country C has a double taxation treaty with the Asian country. This forecast is shown below:

	Actual 2009 C$m	*Forecast 2010 C$m*	*Forecast 2011 C$m*	*Forecast 2012 C$m*	*Forecast 2013 C$m*	*Forecast 2014 C$m*
Incremental revenue	5.00	5.15	5.30	5.46	5.63	5.80
Incremental costs	1.00	1.03	1.06	1.09	1.13	1.16
Incremental profit for the year	4.00	4.12	4.24	4.37	4.50	4.64
	C$	*C$*	*C$*	*C$*	*C$*	*C$*
Incremental earnings per share	0.022	0.023	0.024	0.024	0.025	0.026
Incremental dividend per share	0.011	0.011	0.012	0.012	0.013	0.013

In preparing this forecast the Management Accountant has used a well established procedure within Aybe which included detailed consultation with Board members and operational managers. Additionally, external market research had been commissioned to assist with such matters as potential demand and customer preferences. Discussion, consultation and consensus have always been considered important aspects of strategic decision-making within Aybe and the Management Accountant has been praised by the Finance Director for following this procedure in her preparation of the five year forecast.

The Director of Operations and Management Accountant
A Board meeting has been scheduled to discuss the continued expansion into Asia. Prior to this, the Director of Operations had asked for a meeting with the Management Accountant to discuss her forecast. At the meeting the Director of Operations was extremely critical about the profit projections within the forecast and he enquired how these had been constructed. The Management Accountant explained that there had been a wide process of consultation both inside and outside of Aybe and that she had followed the normal company procedure for preparing the forecast.

The Director of Operations said that the normal procedures within Aybe were 50 years out of date. He said that business is dynamic and that planning just slowed everything down. He stated that the best way of making strategy was to react to events and to seize opportunities and that consultation and consensus resulted in stagnation. As regards the Management Accountant's profit projections, he felt these were totally unrealistic. The Director of Operations said that he has extensive experience of the electronics markets in Asia, and this, together with his instincts, has led him to a completely different view of the potential for Aybe if the expansion took place.

The Director of Operations then stated the following assumptions for the incremental effects of the Asian expansion:

a. Take the actual results given above for year ended 31 December 2009 as the base year for the forecast.

b. Revenue will increase by 25% compound per year from the base year to the end of the forecast period.

c. Incremental operating costs will be 20% of revenue each year during the forecast period.

The Director of Operations instructed the Management Accountant to prepare a new five year forecast, for presentation at the Board meeting, using the above assumptions. The Director of Operations instructed the Management Accountant to destroy her original forecast. The Management Accountant stated that this was not the way things are normally done at Aybe and that the Director of Operation's projections for revenue were unrealistically optimistic. The Director of Operations replied that it was not the role of a management accountant to question a director's professional expertise but rather a good management accountant should help him by carrying out his requests. The Director of Operations was not willing to discuss the matter further with the Management Accountant and pointed out that he had the unqualified support of a NED. The Director of Operations insisted the management accountant do the following:

- Produce a revised five year forecast incorporating the Director of Operations' assumptions;
- Present the revised forecast at the forthcoming Board meeting;
- Destroy the Management Accountant's original forecast.

The requirement for Question One is on page 11 which is detachable for ease of reference

TURN OVER

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Required

(a)

(i) Discuss the relevance of the style of strategy currently in use at Aybe to the development of the Asian markets.

(5 marks)

(ii) Advise the Board of **two** alternative approaches to strategy which you consider Aybe could use in the development of the Asian markets. Explain why you consider your choices may be appropriate.

(6 marks)

(b) Evaluate the suitability of Aybe's current organisational structure in respect of the proposed expansion into Asian markets.

(9 marks)

(c)

(i) Explain **two** control problems Aybe might encounter if it chooses to conduct its business in Asia using agents.

(4 marks)

(ii) Advise Aybe of appropriate control measures it could use to deal with the problems you have explained in *(c)(i).*

(6 marks)

(d)

(i) Construct an incremental profit forecast for the Asian expansion for the period 2010 – 2014 using the assumptions proposed by the Director of Operations and the actual results for year ended 31 December 2009.

(4 marks)

(ii) Discuss the consequences for the shareholders of the revised incremental profit forecast constructed in *d(i)*.

(6 marks)

(iii) Evaluate how the views of the Director of Operations about the Management Accountant's profit forecast and the role of management accountants represent an ethical dilemma for the Management Accountant of Aybe.

(10 marks)

(Total marks for Question One = 50 marks)

(Total for Section A = 50 marks)

End of Section A
Section B starts on page 14

TURN OVER

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SECTION B – 50 MARKS

[the indicative time for answering this section is 90 minutes]

ANSWER *TWO* OF THE THREE QUESTIONS – 25 MARKS EACH

Question Two

JGS is a long-established retailer which specialises in the sale of antiques*. JGS is owned by a married couple who both work in the business. They have no employees. Their premises consist of a large modern shop and there is an apartment above this in which the owners live. Over the last five years the local area has become very fashionable and the shop is now surrounded by smart restaurants, cafes and up-market fashion outlets. This area has also become a very popular place to live which has meant that property values have increased substantially. The owners believe that if they disposed of their premises they would make a substantial capital gain. The owners have noticed that the fixed costs of their property, including insurance, local tax, security and maintenance have risen very sharply during the last five years.

Since establishing the business the owners have developed their expertise. They now have a national reputation in the antiques trade and many repeat customers. They traded profitably between 1980 and 2008 but in the last year have made an operating loss for the first time. The owners are often consulted by other antique traders and collectors by letter and telephone and they have developed a considerable income stream by charging for their advice. However, they have found that their location is becoming increasingly problematic. Although the popularity of their area of town has increased and led to many more people living and visiting the area, unfortunately for the owners most of these people are not interested in antiques. They are young people who like the area but do not have the disposable income to spend on antiques.

A further problem is that the shop is not situated in a large city and it is very inconvenient for many antique traders and collectors to visit. The owners believe the location has recently restricted the success of their business. The owners know that a very popular development in the antiques trade has been the establishment of 'Antiques Fairs' where antiques are bought and sold. Some of these have established international reputations and have many thousands of visitors. However, because of JGS's location and the need to keep their shop open, the owners do not attend these. The owners recently set up a website which has basic information about their business on it such as their address, telephone number and the opening times of their shop. The website has received a large number of hits but it does not seem to have increased sales.

* Antique = 'a decorative object that is valuable because of its age'. *(Oxford Concise Dictionary)*

The requirement for Question Two is on the opposite page

Required

(a) Analyse the strengths and weaknesses of JGS using the value chain model.

Note: You are not required to draw a value chain diagram in any part of your answer to this question.

(8 marks)

(b) The owners propose to convert their website to facilitate e-commerce in order to increase turnover and profit.

Advise the owners of JGS what they will have to do immediately, and also on a continuing basis, to carry out this e-commerce solution.

(8 marks)

(c) Evaluate how the introduction of e-commerce could affect JGS's value chain.

(9 marks)

(Total for Question Two = 25 marks)

Section B continues on the next page

TURN OVER

Question Three

In a widely published model, Johnson, Scholes and Whittington characterise the strategic management process as consisting of three inter-related elements:

- strategic analysis
- strategic choice
- strategic implementation

Required:

(a) Explain why strategic implementation is included in the Johnson, Scholes and Whittington model.

Note: You are not required to draw the model.

(5 marks)

RCH, an international hotel group with a very strong brand image has recently taken over TDM, an educational institution based in Western Europe. RCH has a very good reputation for improving the profitability of its business units and prides itself on its customer focus. The CEO of RCH was recently quoted as saying 'Our success is built on happy customers: we give them what they want'. RCH continually conducts market and customer research and uses the results of these researches to inform both its operational and longer term strategies.

TDM is well-established and has always traded profitably. It offers a variety of courses including degrees both at Bachelor and Masters levels and courses aimed at professional qualifications. TDM has always concentrated on the quality of its courses and learning materials. TDM has never seen the need for market and customer research as it has always achieved its sales targets. Its students consistently achieve passes on a par with the national average. TDM has always had the largest market share in its sector even though new entrants continually enter the market. TDM has a good reputation and has not felt the need to invest significantly in marketing activities. In recent years, TDM has experienced an increasing rate of employee turnover.

RCH has developed a sophisticated set of Critical Success Factors which is integrated into its real-time information system. RCH's rationale for the take-over of TDM was the belief that it could export its customer focus and control system, based on Critical Success Factors, to TDM. RCH believed that this would transform TDM's performance and increase the wealth of RCH's shareholders.

Required

(b)

(i) Identify **four** Critical Success Factors which would be appropriate to use for TDM.

(4 marks)

(ii) Recommend, with reasons, **two** Key Performance Indicators to support **each** of the **four** Critical Success Factors you have identified.

(16 marks)

(Total for Question Three = 25 marks)

Section B continues on the opposite page

Question Four

XZY, a publicly quoted company has expanded rapidly since its formation in 2005. Its rapid growth rate, based on a broad range of well-regarded products manufactured and sold exclusively within Asia, has led to high profits and an ever increasing share price. However, in the last year, XZY has found its growth rate difficult to sustain. XZY's core strategy has been described by its CEO as 'selling what we know to who we know'. However, this view has been criticised by a number of financial analysts and journalists who have warned that if XZY's growth rate is not maintained its share price will fall and the value of the company will reduce. XZY has a functional organisational structure and currently employs around 800 employees. The number of employees has grown by 20% since 2008.

Required:

(a) Evaluate, using Ansoff's product market scope matrix, the alternative strategies XZY could follow to maintain its growth rate in profits and share price.

Note: Ansoff's model is also described as the growth vector matrix. You are not required to draw this model.

(12 marks)

The Human Resource Director of XZY has suggested that she carries out a review of XZY with the purpose of saving a significant amount of money by reorganising the company and reducing employee numbers. In this way, she considers she would be making a contribution towards maintaining XZY's profit growth rate. The CEO is interested in this idea but he is aware that changing organisational structure can be difficult. The CEO knows from his previous experience that such reorganisations do not always achieve their intended results.

Required

(b) Advise the CEO of the difficulties which may be encountered in changing the organisational structure of XZY and reducing employee numbers.

(5 marks)

(c) Recommend how the CEO could manage the process of changing the organisational structure.

(8 marks)

(Total for Question Four = 25 marks)

End of Question Paper

Maths Tables and Formulae are on Pages 19 and 20

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MATHS TABLES AND FORMULAE

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 (*n*)	Interest rates (*r*) 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 (*n*)	Interest rates (*r*) 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:

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

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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	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

Enterprise Pillar

Strategic Level Paper

E3 – Enterprise Strategy

May 2010

Tuesday Morning Session