



Financial Management Pillar

Managerial Level Paper

P8 – Financial Analysis

20 May 2008 – Tuesday Afternoon Session

Instructions to candidates

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| 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). The question requirements for questions in Sections B and C are highlighted in a dotted box. |
| ALL answers must be written in the answer book. Answers written on the question paper will not be submitted for marking. |
| Answer the ONE compulsory question in Section A. This has nine objective test questions on pages 2 to 4. |
| Answer ALL THREE questions in Section B on pages 6 to 8. |
| Answer TWO of the three questions in Section C on pages 10 to 14. |
| Maths Tables are provided on pages 15 to 17. These are detachable for ease of reference. |
| 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 which questions you have answered. |

P8 – Financial Analysis

TURN OVER

SECTION A – 20 MARKS

[indicative time for answering this Section is 36 minutes]

ANSWER ALL NINE SUB-QUESTIONS

Instructions for answering Section A:

The answers to the nine sub-questions in Section A should ALL be written in your answer book.

Your answers should be clearly numbered with the sub-question number and then ruled off, so that the markers know which sub-question you are answering. **For multiple choice questions, you need only write the sub-question number and the letter of the answer option you have chosen.** You do not need to start a new page for each sub-question.

For sub-questions **1.2, 1.6 and 1.7**, you should show your workings as marks are available for method for these sub-questions.

Question One

- 1.1** AB owns 60% of the issued ordinary share capital of CD. CD owns 60% of the issued ordinary share capital of EF. Which ONE of the following statements is correct?

The effective interest of AB in EF is

- A** 20%
- B** 24%
- C** 36%
- D** 60%

(2 marks)

-
- 1.2** SG acquired a controlling interest in TH on 1 April 2007, paying 3 million shillings (TH's functional currency) for 700,000 of TH's issued share capital of 1,000,000 1 shilling ordinary shares. TH's reserves at the date of acquisition were 1,500,000 shillings.

Rates of exchange were:

1 April 2007 1\$ = 5 shillings
31 March 2008 1\$ = 4.7 shillings

Calculate goodwill on acquisition (assuming no impairment has taken place) in respect of the TH acquisition for inclusion in the SG group's balance sheet at 31 March 2008.

(2 marks)

- 1.3** On 31 December 2007, LMN set up a joint venture entity, OPQ, with two partners. Each partner owns exactly one third of the issued share capital of OPQ and all business decisions are taken jointly.

Throughout its financial year ended 31 March 2008, LMN held 80% of the share capital of its subsidiary RST.

Revenue for the period ended 31 March 2008 recorded in the books of the three entities was as follows:

| | |
|-----|--------|
| | \$ |
| LMN | 21,500 |
| OPQ | 5,400 |
| RST | 12,600 |

LMN's directors have decided to adopt the proportionate method of consolidation where permitted by IFRS. During the year, RST supplied LMN with goods with a sales value of \$1,400. The cost to RST of these goods was \$1,200.

What is the amount of consolidated revenue for inclusion in LMN's group income statement for the year ended 31 March 2008?

- A** \$31,980
- B** \$33,150
- C** \$34,500
- D** \$34,700

(2 marks)

-
- 1.4** The current cost accounting (CCA) method of accounting for changing price levels requires a series of adjustments to historical cost operating profit.

Describe the purpose and nature of the cost of sales adjustment (CoSA).

(2 marks)

-
- 1.5** CDP made an issue of 5% cumulative preference shares during its financial year ended 31 January 2008. The shares have no fixed redemption date. (Under the terms of the issue CDP does not have to pay the 5% distribution in a given year, but if it fails to do so, the obligation is carried forward to a future year).

Categorise the financial instrument as either equity or liability, and give the reason for your categorisation.

(2 marks)

Section A continues on the next page

TURN OVER

- 1.6** HXB is a manufacturer of machinery. On 30 September 2007, it sold a machine to its 100% subsidiary, IYC, for \$200,000. The cost to HXB of the machine was \$150,000. IYC recorded the asset in its own books at the initial cost of \$200,000. IYC's policy is to depreciate machinery at 2% per full month of ownership, on the straight line basis.

Calculate the consolidation adjustment, and prepare the appropriate consolidation journal entry, in respect of this asset for the consolidated financial statements of the HXB group for the year ended 31 March 2008.

(3 marks)

- 1.7** On 1 March 2007, XPR acquired control of YQS, purchasing 60% of its issued ordinary share capital. YQS is located in a country where compliance with most, but not all, IFRS is required by law. For example, there is no requirement to discount liabilities. No material fair value adjustments were identified at the date of acquisition of YQS, except in respect of a deferred liability to a supplier which will fall due on 1 March 2009. The amount payable on that date will be \$300,000. The discount rate relevant to the liability is 8%.

YQS's profit for the period ended 29 February 2008 was \$67,600 before taking into account any unwinding of the discount in respect of the liability referred to above.

Calculate the share of profit for the period attributable to equity shareholders of the parent, after taking into account any adjustment required in respect of the liability.

(3 marks)

- 1.8** NST runs a defined benefit pension scheme for its employees. NST uses the "corridor" approach for the recognition of actuarial gains and losses permitted by IAS 19 *Employee Benefits*. At 30 April 2008, the present value of the pension obligation was \$18.6 million. Unrecognised actuarial gains at that date were \$0.7 million and the fair value of plan assets was \$16.9 million.

Calculate the net plan asset or liability for inclusion in NST's balance sheet at 30 April 2008.

(2 marks)

- 1.9** Describe the appropriate accounting treatment, as required by IAS 39 *Financial Instruments: Recognition and Measurement* for gains or losses on financial assets classified as "held-for-trading".

(2 marks)

(Total for Question One = 20 marks)

End of Section A

Section B starts on the next page

TURN OVER

SECTION B – 30 MARKS

ANSWER ALL THREE QUESTIONS

Question Two

Summarised statements of changes in equity for the year ended 31 March 2008 for AAY and its only subsidiary, BBZ, are shown below:

| | <i>AAY</i> \$000 | <i>BBZ</i> \$000 |
|--------------------------|---------------------|---------------------|
| Balance at 1 April 2007 | 662,300 | 143,700 |
| Profit for the period | 81,700 | 22,000 |
| Dividends | <u>(18,000)</u> | <u>(6,000)</u> |
| Balance at 31 March 2008 | <u>726,000</u> | <u>159,700</u> |

Notes:

1. AAY acquired 80% of the issued share capital of BBZ on 1 April 2005, when BBZ's total equity was \$107.7 million. The first dividend BBZ has paid since acquisition is the amount of \$6 million shown in the summarised statement above. The profit for the period of \$81,700 in AAY's summarised statement of changes in equity above does **not** include its share of the dividend paid by BBZ.
2. The only consolidation adjustment required is in respect of intra-group trading. BBZ regularly supplies goods to AAY. The amount included in the inventory of AAY in respect of goods purchased from BBZ at the beginning and end of the accounting period was as follows:

| | |
|---------------|-------------|
| 1 April 2007 | \$2 million |
| 31 March 2008 | \$3 million |

BBZ earns a profit on intra-group sales of 25% on cost.

Required:

Prepare a summarised consolidated statement of changes in equity for the AAY Group for the year ended 31 March 2008.

(Total for Question Two = 10 marks)

Question Three

On 1 February 2007, the directors of AZG decided to enter into a forward foreign exchange contract to buy 6 million florins at a rate of \$1 = 3 florins, on 31 January 2010. AZG's year end is 31 March.

Relevant exchange rates were as follows:

| | |
|-----------------|-------------------|
| 1 February 2007 | \$1 = 3 florins |
| 31 March 2007 | \$1 = 2.9 florins |
| 31 March 2008 | \$1 = 2.8 florins |

Required:

- (a) Identify the three characteristics of a derivative financial instrument as defined in IAS 39 *Financial Instruments: Recognition and Measurement*.
(3 marks)
- (b) Describe the requirements of IAS 39 in respect of the recognition and measurement of derivative financial instruments.
(2 marks)
- (c) Prepare relevant extracts from AZG's income statement and balance sheet to reflect the forward foreign exchange contract at 31 March 2008, with comparatives. (Note: ignore discounting when measuring the derivative).
(5 marks)

(Total for Question Three = 10 marks)

Question Four

An important development in international accounting in recent years has been the convergence project between the IASB and the US standard setter, the Financial Accounting Standards Board (FASB).

Required:

- (a) Describe the objectives, and progress to date, of the convergence project, illustrating your response with examples of the work that has been successfully undertaken. *(6 marks)*
- (b) Identify four continuing, and significant, areas of difference that exist between IFRS and US GAAP. *(4 marks)*

(Total for Question Four = 10 marks)

(Total for Question Two = 30 marks)

End of Section B

Section C starts on the next page

TURN OVER

SECTION C – 50 MARKS

ANSWER TWO QUESTIONS OUT OF THREE

Question Five

Several years ago, on leaving university, Fay, Jay and Kay set up a business, FJK, designing and manufacturing furniture for sale to retailers. When FJK was established, Fay and Jay each took 45% of the share capital, with Kay holding the remaining 10%. This arrangement has remained unchanged. Fay and Jay have always worked full-time in the business and remain its sole directors. Kay's role was initially part-time, but after the first two years she transferred to full-time work in her own consultancy business. Her contribution to FJK in recent years has been limited to occasionally providing advice. The relationship between the three shareholders has remained good, but all three are so busy that Kay rarely meets the others. FJK has been successful, and in February of each year, with the exception of 2008, has paid a substantial dividend to its three shareholders.

Kay's consultancy business has also been successful and she now employs 20 staff. You are Kay's financial adviser.

During 2006, the two directors decided to expand FJK's international sales, by establishing sales forces in two neighbouring countries. By early 2007, orders were starting to come in from the new countries. The expansion strategy has been very successful. Last week, Kay attended a meeting with Fay and Jay, to discuss the future of FJK. Fay and Jay explained that the business now requires more capital in order to fund further expansion, and the purpose of the meeting with Kay was to request her to inject capital of \$250,000 into the business.

Kay was provided with a draft income statement for the year ended 31 March 2008 and a balance sheet at that date (given below). The draft statements are unaudited, but the figures are not expected to change, except for the income tax expense figure for 2008. FJK's accountant has not yet completed a tax calculation and so the 2007 figure of \$164,000 has been used as an estimate. No statement of changes in equity has been provided, but the only movements on it would be in respect of a revaluation of property, plant and equipment that took place during the year, and the movement on retained earnings for profit for the period.

Kay, who has a reasonably good understanding of financial statements, is impressed by the revenue and profit growth. However, she has asked you, as her financial adviser, to look at the figures, in order to identify possible risks and problem areas.

FJK: Draft income statement for the year ended 31 March 2008

| | 2008 \$000 | 2007 \$000 |
|-------------------------|---------------|---------------|
| Revenue | 5,973 | 3,886 |
| Cost of sales | (4,318) | (2,868) |
| Gross profit | 1,655 | 1,018 |
| Distribution costs | (270) | (106) |
| Administrative expenses | (320) | (201) |
| Finance costs | (97) | (40) |
| Profit before tax | 968 | 671 |
| Income tax expense | (164) | (164) |
| Profit for the period | 804 | 507 |

FJK: Draft balance sheet at 31 March 2008

| | 2008 | | 2007 | |
|--------------------------------------|-------------------|--------------|-------------------|--------------|
| | \$000 | \$000 | \$000 | \$000 |
| ASSETS | | | | |
| Non-current assets | | | | |
| Property, plant and equipment | | 3,413 | | 1,586 |
| Current assets | | | | |
| Inventories | 677 | | 510 | |
| Trade and other receivables | 725 | | 553 | |
| Cash | - | | 12 | |
| | <u> </u> | <u>1,402</u> | <u> </u> | <u>1,075</u> |
| | | <u>4,815</u> | | <u>2,661</u> |
| EQUITY AND LIABILITIES | | | | |
| Equity | | | | |
| Called up share capital (\$1 shares) | 1 | | 1 | |
| Retained earnings | 2,166 | | 1,362 | |
| Revaluation reserve | 167 | | - | |
| | | <u>2,334</u> | | <u>1,363</u> |
| Non-current liabilities | | | | |
| Long-term borrowings | | 763 | | 453 |
| Current liabilities | | | | |
| Loans and borrowings | 327 | | 103 | |
| Trade and other payables | 1,227 | | 578 | |
| Income tax | 164 | | 164 | |
| | | <u>1,718</u> | | <u>845</u> |
| | | <u>4,815</u> | | <u>2,661</u> |

Required:

Prepare a report for Kay that

- (a) analyses and interprets the draft financial statements and discusses FJK's performance and position. *(19 marks)*
- (b) discusses possible risks and problem areas revealed by the financial statements, and the actions that the directors could take to address these risks and problems. *(6 marks)*

(Up to 8 marks are available for the calculation of relevant accounting ratios).

(Total for Question Five = 25 marks)

Section C continues on the next page

TURN OVER

Question Six

Extracts from the consolidated financial statements of the EAG Group for the year ended 30 April 2008 are as follows:

EAG Group: Consolidated income statement for the year ended 30 April 2008

| | <i>\$ million</i> |
|---------------------------------|-------------------|
| Revenue | 30,750.0 |
| Cost of sales | <u>(26,447.5)</u> |
| Gross profit | 4,302.5 |
| Distribution costs | (523.0) |
| Administrative expenses | (669.4) |
| Finance cost | (510.9) |
| Share of profit of associate | 1.6 |
| Profit on disposal of associate | <u>3.4</u> |
| Profit before tax | 2,604.2 |
| Income tax | <u>(723.9)</u> |
| Profit for the period | <u>1,880.3</u> |
| Attributable to | |
| Equity holders of the parent | 1,652.3 |
| Minority interests | <u>228.0</u> |
| | <u>1,880.3</u> |

EAG Group: Balance sheet at 30 April 2008

| | <i>\$ million</i> | 2008 <i>\$ million</i> | <i>\$ million</i> | 2007 <i>\$ million</i> |
|--------------------------------|-------------------|---------------------------|-------------------|---------------------------|
| ASSETS | | | | |
| Non-current assets | | | | |
| Property, plant and equipment | 22,225.1 | | 19,332.8 | |
| Goodwill | 1,662.7 | | 1,865.3 | |
| Intangible assets | 306.5 | | 372.4 | |
| Investment in associate | <u>-</u> | | <u>13.8</u> | |
| | | 24,194.3 | | 21,584.3 |
| Current assets | | | | |
| Inventories | 5,217.0 | | 4,881.0 | |
| Trade receivables | 4,633.6 | | 4,670.0 | |
| Cash | <u>62.5</u> | | <u>88.3</u> | |
| | | 9,913.1 | | 9,639.3 |
| | | <u>34,107.4</u> | | <u>31,223.6</u> |
| EQUITY AND LIABILITIES | | | | |
| Equity | | | | |
| Share capital | 4,300.0 | | 3,600.0 | |
| Retained earnings | <u>14,643.7</u> | | <u>12,991.4</u> | |
| | | 18,943.7 | | 16,591.4 |
| Minority interest | | | | |
| | | 2,010.5 | | 1,870.5 |
| Non-current liabilities | | | | |
| Long-term borrowings | | 6,133.9 | | 6,013.0 |
| Current liabilities | | | | |
| Trade payables | 5,579.3 | | 5,356.3 | |
| Short-term borrowings | 662.4 | | 507.7 | |
| Income tax | <u>777.6</u> | | <u>884.7</u> | |
| | | 7,019.3 | | 6,748.7 |
| | | <u>34,107.4</u> | | <u>31,223.6</u> |

Notes

1. Depreciation of \$2,024.7 million was charged in respect of property, plant and equipment in the year ended 30 April 2008.
2. On 1 January 2008 EAG disposed of the investment in associate for \$18 million. The share of profit in the income statement relates to the period from 1 May 2007 to 31 December 2007. A dividend was received from the associate on 1 June 2007. There were no other disposals, and no acquisitions, of investments in the accounting period.
3. Goodwill in one of the group's subsidiaries suffered an impairment during the year. The amount of the impairment was included in cost of sales.
4. The long-term borrowings are measured at amortised cost. The borrowing was taken out on 1 May 2006, and proceeds of \$6,000 million less issue costs of \$100,000 were received on that date. Interest of 5% of the principal is paid in arrears each year, and the borrowings will be redeemed on 30 April 2011 for \$6.55 million. All interest obligations have been met on the due dates. The effective interest rate applicable to the borrowings is 7%. The finance cost in the income statement includes interest in respect of both the long-term and the short-term borrowing. Short-term borrowing comprises overdrafts repayable on demand.
5. Amortisation of 25% of the opening balance of intangibles was charged to cost of sales. A manufacturing patent was acquired for a cash payment on 30 April 2008.
6. An issue of share capital at par was made for cash during the year.
7. Dividends were paid to minority interests during the year, but no dividend was paid to the equity holders of the parent entity.

Required:

Prepare the consolidated cash flow statement of the EAG Group for the financial year ended 30 April 2008. The cash flow statement should be presented in accordance with the requirements of IAS 7 *Cash Flow Statements*, and using the indirect method. Notes to the financial statement are NOT required, but full workings should be shown.

(Total for Question Six = 25 marks)

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Question Seven

BHG is a successful listed entity that designs and markets specialist business software. BHG's directors have decided to adopt a policy of expansion into overseas territories through the acquisition of similar software businesses possessing established shares of their domestic markets. BHG's aim is to obtain control, or at the minimum, significant influence (represented by at least 40% of issued share capital) of investee entities. Target investee entities are likely to be listed entities in their own countries, but the acquisition of unlisted entities is not ruled out.

You are a senior accountant in BHG, and you have been asked by the Chief Financial Officer (CFO) to establish a set of key accounting ratios for use in:

1. the initial appraisal of potential acquisitions;
2. on-going appraisal following acquisitions.

The ratios will be used as part of a suite of quantitative and non-quantitative measurements to compare businesses with each other. The CFO has suggested that it would be appropriate to identify no more than 5-7 key financial ratios.

One of your assistants has suggested a list of 5 key accounting ratios as suitable for both initial and on-going appraisal and comparison. She has provided reasons to support the case for their inclusion as key ratios.

1. Earnings per share: "one of the most important investor ratios, widely used by all classes of investor to assess business performance".
2. Dividend yield: "this ratio provides a very useful measurement that allows comparison with yields from other equity and non-equity investments".
3. Gearing: "this is of critical importance in determining the level of risk of an equity investment".
4. Gross profit margin: "allows investors to assess business performance, and is of particular use over several accounting periods within the same organisation. It is also very useful for comparing performances between businesses".
5. Asset turnover ratios: "allow the investor to compare the intensity of asset usage between businesses, and over time".

Required:

- (a) Discuss the extent to which each of the 5 suggested accounting ratios is likely to be useful to BHG for both initial and on-going appraisal and comparison, and the extent to which your assistant's assessments of the value of the ratios are justified. (15 marks)
- (b) Explain the problems and limitations of accounting ratio analysis in making inter-firm and international comparisons. (10 marks)

(Total for Question Seven = 25 marks)

End of Section C. End of Question Paper

Maths Tables and Formulae are on pages 15-17

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 (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 | 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 (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 | 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 | 4.793 | 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 receivable or payable 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:

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

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

Financial Management Pillar

Managerial Level

P8 – Financial Analysis

May 2008

Tuesday Afternoon Session