



Financial Management Pillar
Managerial Level Paper
P7 – Financial Accounting and Tax Principles
24 May 2007 – Thursday Afternoon 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). The requirements for the questions in Sections B and C are highlighted in a dotted box.
ALL answers must be written in the answer book. Answers or notes written on the question paper will not be submitted for marking.
Answer the ONE compulsory question in Section A. This has 15 sub-questions on pages 2 to 7.
Answer the SIX compulsory sub-questions in Section B on pages 8 to 11.
Answer the ONE compulsory question in Section C on pages 12 to 13.
Maths Tables and Formulae are provided on pages 15 to 17. These pages 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.

P7 – Financial Accounting and Tax Principles

TURN OVER

SECTION A – 40 MARKS

[the indicative time for answering this Section is 72 minutes]

ANSWER ALL FIFTEEN SUB-QUESTIONS

Instructions for answering Section A:

The answers to the fifteen sub-questions in Section A must 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 **1.3**, **1.7**, **1.13** and **1.15** you should show your workings as marks are available for the method you use to answer these sub-questions.

Question One

1.1 DH has the following two legal claims outstanding:

- A legal action against DH claiming compensation of \$700,000, filed in February 2007. DH has been advised that it is probable that the liability will materialise.
- A legal action taken by DH against another entity, claiming damages of \$300,000, started in March 2004. DH has been advised that it is probable that it will win the case.

How should DH report these legal actions in its financial statements for the year ended 30 April 2007?

	<i>Legal action against DH</i>	<i>Legal action taken by DH</i>
A	Disclose by a note to the accounts	No disclosure
B	Make a provision	No disclosure
C	Make a provision	Disclose as a note
D	Make a provision	Accrue the income

(2 marks)

1.2 Country X uses a Pay-As-You-Earn (PAYE) system for collecting taxes from employees. Each employer is provided with information about each employee's tax position and tables showing the amount of tax to deduct each period. Employers are required to deduct tax from employees and pay it to the revenue authorities on a monthly basis.

From the perspective of the government, list THREE advantages of the PAYE system.

(3 marks)

- 1.3** DS uses the Economic Order Quantity (EOQ) model. Demand for DS's product is 95,000 units per annum. Demand is evenly distributed throughout the year. The cost of placing an order is \$15 and the cost of holding a unit of inventory for a year is \$3.

How many orders should DS make in a year?

(3 marks)

- 1.4** According to the International Accounting Standards Board's *Framework for the Preparation and Presentation of Financial Statements*, what is the objective of financial statements?

Write your answer in no more than **35** words.

(2 marks)

- 1.5** The International Standard on Auditing 701 *Modifications to the Independent Auditor's Report*, classifies modified audit reports into "matters that do not affect the auditor's opinion" and "matters that do affect the auditor's opinion". This latter category is further sub-divided into three categories.

List these THREE categories.

(3 marks)

- 1.6** DY's trade receivables balance at 1 April 2006 was \$22,000. DY's income statement showed revenue from credit sales of \$290,510 during the year ended 31 March 2007.

DY's trade receivables at 31 March 2007 were 49 days.

Assume DY's sales occur evenly throughout the year and that all balances outstanding at 1 April 2006 have been received.

Also, it should be assumed all sales are on credit, there were no bad debts and no trade discount was given.

How much cash did DY receive from its customers during the year to 31 March 2007?

- A** \$268,510
- B** \$273,510
- C** \$312,510
- D** \$351,510

(2 marks)

Section A continues on the next page

TURN OVER

- 1.7** DD purchased an item of plant and machinery costing \$500,000 on 1 April 2004, which qualified for 50% capital allowances in the first year, and 20% each year thereafter, on the reducing balance basis.

DD's policy in respect of plant and machinery is to charge depreciation on a straight line basis over five years, with no residual value. On 1 April 2006, DD decides to revalue the item of plant and machinery upwards, from its net book value, by \$120,000.

Assuming there are no other capital transactions in the three year period and a tax rate of 30% throughout, calculate the amount of deferred tax to be shown in DD's income statement for the year ended 31 March 2007, and the deferred tax provision to be included in its balance sheet at 31 March 2007.

(4 marks)

- 1.8** On 31 March 2007, DT received an order from a new customer, XX, for products with a sales value of \$900,000. XX enclosed a deposit with the order of \$90,000.

On 31 March 2007, DT had not completed credit referencing of XX and had not despatched any goods. DT is considering the following possible entries for this transaction in its financial statements for the year ended 31 March 2007:

- (i) include \$900,000 in income statement revenue for the year;
- (ii) include \$90,000 in income statement revenue for the year;
- (iii) do not include anything in income statement revenue for the year;
- (iv) create a trade receivable for \$810,000;
- (v) create a trade payable for \$90,000.

According to IAS 18 *Revenue Recognition*, how should DT record this transaction in its financial statements for the year ended 31 March 2007?

- A** (i) and (iv)
- B** (ii) and (v)
- C** (iii) and (iv)
- D** (iii) and (v)

(2 marks)

- 1.9** Excise duties are deemed to be most suitable for commodities that have certain specific characteristics.

List THREE characteristics of a commodity that, from a revenue authority's point of view, would make that commodity suitable for an excise duty to be imposed.

(3 marks)

1.10 During its 2006 accounting year, DL made the following changes.

Which ONE of these changes would be classified as “a change in accounting policy” as determined by IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*?

- A** Increased the bad debt provision for 2006 from 5% to 10% of outstanding debts.
- B** Changed the treatment of borrowing costs from capitalising borrowing costs incurred on capital projects to treating all borrowing costs as an expense in the year incurred.
- C** Changed the depreciation of plant and equipment from straight line depreciation to reducing balance depreciation.
- D** Changed the useful economic life of its motor vehicles from six years to four years.

(2 marks)

1.11 DR has the following balances under current assets and current liabilities:

Current assets	\$
Inventory	50,000
Trade receivables	70,000
Bank	10,000
Current liabilities	\$
Trade payables	88,000
Interest payable	7,000

DR's quick ratio is

- A** 0.80 : 1
- B** 0.84 : 1
- C** 0.91 : 1
- D** 1.37 : 1

(2 marks)

1.12 Which ONE of the following is most likely to increase an entity's working capital?

- A** Delaying payment to trade payables.
- B** Reducing the credit period given to customers.
- C** Purchasing inventory on credit.
- D** Paying a supplier and taking an early settlement discount.

(2 marks)

Section A continues on the next page

TURN OVER

- 1.13** Details from DV's long-term contract, which commenced on 1 May 2006, at 30 April 2007 were:

	<i>\$000</i>
Invoiced to client for work done	2,000
Costs incurred to date:	
Attributable to work completed	1,500
Inventory purchased, but not yet used	250
Progress payment received from client	900
Expected further costs to complete project	400
Total contract value	3,000

DV uses the percentage of costs incurred to total costs to calculate attributable profit.

Calculate the amount that DV should recognise in its income statement for the year ended 30 April 2007 for revenue, cost of sales and attributable profits on this contract according to IAS 11 *Construction Contracts*.

(4 marks)

- 1.14** Country Y has a VAT system which allows entities to reclaim input tax paid.

In Country Y the VAT rates are:

Zero rated	0%
Standard rated	15%

DE runs a small retail store. DE's sales include items that are zero rated, standard rated and exempt.

DE's electronic cash register provides an analysis of sales. The figures for the three months to 30 April 2007 were:

	<i>Sales value, excluding VAT</i>
	\$
Zero rated	11,000
Standard rated	15,000
Exempt	<u>13,000</u>
Total	<u>39,000</u>

DE's analysis of expenditure for the same period provided the following:

	<i>Expenditure, excluding VAT</i>
	\$
Zero rated purchases	5,000
Standard rated purchases relating to standard rate outputs	9,000
Standard rated purchases relating to exempt outputs	7,000
Standard rated purchases relating to zero rated outputs	<u>3,000</u>
	<u>24,000</u>

Calculate the VAT due to/from DE for the three months ended 30 April 2007.

(2 marks)

- 1.15** A bond has a current market price of \$83. It will repay its face value of \$100 in seven years' time and has a coupon rate of 4%.

If the bond is purchased at \$83 and held, what is its yield to maturity?

(4 marks)

(Total for Question One = 40 marks)

Reminder

All answers to Section A must be written in your answer book.

Answers to Section A written on the question paper will **not** be submitted for marking.

End of Section A

Section B starts on page 8

TURN OVER

SECTION B – 30 MARKS

[the indicative time for this Section is 54 minutes]

ANSWER ALL SIX SUB-QUESTIONS. EACH SUB-QUESTION IS WORTH 5 MARKS.

Question Two

(a)

Country Z has the following tax regulations in force for the years 2005 and 2006 (each year January to December):

- Corporate income is taxed at the following rates:
 - \$1 to \$10,000 at 0%;
 - \$10,001 to \$25,000 at 15%;
 - \$25,001 and over at 25%.
- When calculating corporate income tax, Country Z does **not** allow the following types of expenses to be charged against taxable income:
 - Entertaining expenses;
 - Taxes paid to other public bodies;
 - Accounting depreciation of non-current assets.
- Tax relief on capital expenditure is available at the following rates:
 - Buildings at 4% per annum on straight line basis;
 - All other non-current tangible assets are allowed tax depreciation at 27% per annum on reducing balance basis.

DB commenced business on 1 January 2005 when all assets were purchased. No first year allowances were available for 2005.

Non-current assets cost at 1 January 2005

	\$
Land	27,000
Buildings	70,000
Plant and equipment	80,000

On 1 January 2006, DB purchased another machine for \$20,000. This machine qualified for a first year tax allowance of 50%.

DB's Income statement for the year to 31 December 2006

	\$
Gross profit	160,000
Administrative expenses	81,000
Entertaining	600
Tax paid to local government	950
Depreciation on buildings	1,600
Depreciation on plant and equipment	20,000
Distribution costs	<u>20,000</u>
	35,850
Finance cost	<u>1,900</u>
Profit before tax	<u>33,950</u>

The question requirement is on the opposite page

Required for (a):

Calculate DB's corporate income tax due for the year 2006.

(Total for sub-question (a) = 5 marks)

-
- (b) On 1 April 2005, DX acquired plant and machinery with a fair value of \$900,000 on a finance lease. The lease is for five years with the annual lease payments of \$228,000 being paid in advance on 1 April each year. The interest rate implicit in the lease is 13.44%. The first payment was made on 1 April 2005.

Required:

- (i) Calculate the finance charge in respect of the lease that will be shown in DX's income statement for the year ended 31 March 2007.
- (ii) Calculate the amount to be shown as a current liability and a non-current liability in DX's balance sheet at 31 March 2007.

(All workings should be to the nearest \$000.)

(Total for sub-question (b) = 5 marks)

-
- (c) *The Framework for the Preparation and Presentation of Financial Statements* (Framework) was first published in 1989 and was adopted by The International Accounting Standards Board (IASB).

Required:

Explain the purposes of the Framework.

(Total for sub-question (c) = 5 marks)

Section B continues on the next page

TURN OVER

- (d) On 1 June 2006, the directors of DP commissioned a report to determine possible actions they could take to reduce DP's losses. The report, which was presented to the directors on 1 December 2006, proposed that DP cease all of its manufacturing activities and concentrate on its retail activities.

The directors formally approved the plan to close DP's factory. The factory was gradually shut down, commencing on 5 December 2006, with production finally ceasing on 15 March 2007. All employees had ceased working, or had been transferred to other facilities in the company, by 29 March 2007. The plant and equipment was removed and sold for \$25,000 (net book value \$95,000) on 30 March 2007.

The factory land and building was being advertised for sale, but had not been sold by 31 March 2007. The net book value of the land and building at 31 March 2007, based on original cost, was \$750,000. The estimated net realisable value of the land and building at 31 March 2007 was \$1,125,000.

Closure costs incurred (and paid) up to 31 March 2007 were \$620,000.

The cash flows, revenues and expenses relating to the factory were clearly distinguishable from DP's other operations. The output from the factory was sold directly to third parties and to DP's retail outlets. The manufacturing facility was shown as a separate segment in DP's segmental information.

Required:

With reference to relevant International Accounting Standards, explain how DP should treat the factory closure in its financial statements for the year ended 31 March 2007.

(Total for sub-question (d) = 5 marks)

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- (e) DN currently has an overdraft on which it pays interest at 10% per year. DN has been offered credit terms from one of its suppliers, whereby it can either claim a cash discount of 2% if payment is made within 10 days of the date of the invoice or pay on normal credit terms, within 40 days of the date of the invoice.

Assume a 365 day year and an invoice value of \$100.

Required:

Explain to DN, with reasons and supporting calculations, whether it should pay the supplier early and take advantage of the discount offered.

(Total for sub-question (e) = 5 marks)

- (f) DF, a sports and fitness training equipment wholesaler has prepared its forecast cash flow for the next six months and has calculated that it will need \$2 million additional short-term finance in three months' time.

DF has an annual gross revenue of \$240 million and achieves a gross margin of 50%. It currently has the following outstanding working capital balances:

- \$16 million trade payables;
- \$20 million trade receivables;
- \$5 million bank overdraft.

DF forecasts that it will be able to repay half the \$2 million within three months and the balance within a further three months.

Required:

Advise DF of possible sources of funding available to it.

(Total for sub-question (f) = 5 marks)

(Total for Section B = 30 marks)

End of Section B

Section C starts on page 12

TURN OVER

SECTION C – 30 MARKS

[the indicative time for this Section is 54 minutes]

ANSWER THIS QUESTION

Question Three

DZ is a manufacturing entity and produces one group of products, known as product Y.

DZ's trial balance at 31 March 2007 is shown below:

	\$000	\$000
8% loan 2020 (see note (xiv))		2,000
Administration expenses	891	
Bank and cash	103	
Cash received on disposal of land		1,500
Cash received on disposal of plant		5
Cost of raw materials purchased in year	2,020	
Direct production labour costs	912	
Distribution costs	462	
Equity shares \$1 each, fully paid		1,000
Income tax (see note (xi))	25	
Inventory of finished goods at 31 March 2006	240	
Inventory of raw materials at 31 March 2006	132	
Land at valuation at 31 March 2006	1,250	
Loan interest paid – half year	80	
Plant and equipment at cost at 31 March 2006	4,180	
Production overheads (excluding depreciation)	633	
Property at cost at 31 March 2006	11,200	
Provision for deferred tax at 31 March 2006 (see note (xii))		773
Provision for depreciation at 31 March 2006: (see notes (iv) and (v))		
Property		1,900
Plant and equipment		2,840
Research and development (see note (vi))	500	
Retained earnings at 31 March 2006		2,024
Revaluation reserve at 31 March 2006		2,100
Revenue		8,772
Trade payables		773
Trade receivables	1,059	
	<u>23,687</u>	<u>23,687</u>

Further information:

- (i) The property cost of \$11,200,000 consisted of land \$3,500,000 and buildings \$7,700,000.
- (ii) During the year, DZ disposed of non-current assets as follows:
- A piece of surplus land was sold on 1 March 2007 for \$1,500,000;
 - Obsolete plant was sold for \$5,000 scrap value on the same date;
 - All the cash received is included in the trial balance;
- Details of the assets sold were:
- | Asset type | Cost | Revalued amount | Accumulated depreciation |
|---------------------|-----------|-----------------|--------------------------|
| Land | \$500,000 | \$1,250,000 | \$0 |
| Plant and equipment | \$620,000 | | \$600,000 |
- (iii) On 31 March 2007, DZ revalued its properties to \$9,800,000 (land \$4,100,000 and buildings \$5,700,000).
- (iv) Buildings are depreciated at 5% per annum on the straight line basis. Buildings depreciation is treated as 80% production overhead and 20% administration.

- (v) Plant and equipment is depreciated at 25% per annum using the reducing balance method, the depreciation being treated as a production overhead.
- (vi) Product Y was developed in-house. Research and development is carried out on a continuous basis to ensure that the product range continues to meet customer demands. The research and development figure in the trial balance is made up as follows:
- | | |
|---|------------|
| Development costs capitalised in previous years | \$000 |
| Less: Amortisation to 31 March 2006 | 867 |
| | <u>534</u> |
| | 333 |
| | 119 |
| Research costs incurred in the year to 31 March 2007 | |
| Development costs (all meet IAS 38 <i>Intangible Assets</i> criteria) incurred in the year to 31 March 2007 | |
| | <u>48</u> |
| Total | <u>500</u> |
- (vii) Development costs are amortised on a straight line basis at 20% per annum.
- (viii) Research and development costs are treated as cost of sales when charged to the income statement.
- (ix) DZ charges a full year's amortisation and depreciation in the year of acquisition and none in the year of disposal.
- (x) Inventory of raw materials at 31 March 2007 was \$165,000. Inventory of finished goods at 31 March 2007 was \$270,000.
- (xi) The directors estimate the income tax charge on the year's profits at \$811,000. The balance on the income tax account represents the underprovision for the previous year's tax charge.
- (xii) The deferred tax provision is to be reduced to \$665,000.
- (xiii) No interim dividend was paid during the year.
- (xiv) The 8% loan is a 20-year loan issued in 2000.

Required:

- (a) Prepare DZ's Property, Plant and Equipment note to the accounts for the year ended 31 March 2007. (6 marks)
- (b) Prepare the income statement and a statement of changes in equity for the year to 31 March 2007 and a balance sheet at that date, in a form suitable for presentation to the shareholders and in accordance with the requirements of International Financial Reporting Standards.

(All workings should be to the nearest \$000).

(24 marks)

Notes to the financial statements are NOT required (except as specified in part (a) of the question), but ALL workings must be clearly shown. Do NOT prepare a statement of accounting policies.

(Total for Question Three = 30 marks)

(Total for Section C = 30 marks)

End of Question Paper. Maths Tables and Formulae are on pages 15-17

TURN OVER

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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 (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

Valuation models

(i) Future value of S , of a sum X , invested for n periods, compounded at $r\%$ interest: $S = X[1 + r]^n$

(ii) Present value of \$1 payable or receivable in n years, discounted at $r\%$ per annum:

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

(iii) Present value of an annuity of \$1 per annum, receivable or payable for n years, commencing in one year, discounted at $r\%$ per annum:

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

(iv) Present value of \$1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at $r\%$ per annum:

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

(v) 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:

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

Inventory management

(i) Economic Order Quantity

$$EOQ = \sqrt{\frac{2C_o D}{C_h}}$$

where: C_o = cost of placing an order
 C_h = cost of holding one unit in Inventory for one year
 D = annual demand

Cash management

(i) Optimal sale of securities, Baumol model:

$$\text{Optimal sale} = \sqrt{\frac{2 \times \text{Annual cash disbursements} \times \text{Cost per sale of securities}}{\text{interest rate}}}$$

(ii) Spread between upper and lower cash balance limits, Miller-Orr model:

$$\text{Spread} = 3 \left[\frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{interest rate}} \right]^{\frac{1}{3}}$$

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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

*P7 – Financial Accounting
and Tax Principles*

May 2007

Thursday Afternoon Session