Financial Management Pillar

Managerial Level Paper

P7 – Financial Accounting and Tax Principles

22 November 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 6.
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 15. The question requirement is on page 15, which is detachable for ease of reference.
Maths Tables and Formulae are provided on pages 17 to 19. 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 **1.9**, **1.10**, **1.11**, **1.13**, **1.14** 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 The International Accounting Standards Board's (IASB) *Framework for the Preparation and Presentation of Financial Statements* (Framework), sets out four qualitative characteristics of financial information.

Two of the characteristics are relevance and comparability. List the other TWO characteristics.

(2 marks)

1.2 IAS 16 *Property, Plant and Equipment* requires an asset to be measured at cost on its original recognition in the financial statements.

EW used its own staff, assisted by contractors when required, to construct a new warehouse for its own use.

Which ONE of the following costs would NOT be included in attributable costs of the non-current asset?

A Clearance of the site prior to work commencing.

B Professional surveyors' fees for managing the construction work.

C EW's own staff wages for time spent working on the construction.

D An allocation of EW's administration costs, based on EW staff time spent on the construction as a percentage of the total staff time.

(2 marks)

1.3 An external auditor gives a qualified audit report that is a "disclaimer of opinion".

This means that the auditor

A has been unable to agree with an accounting treatment used by the directors in relation to a material item.

B has been prevented from obtaining sufficient appropriate audit evidence.

C has found extensive errors in the financial statements and concludes that they do not show a true and fair view.

D has discovered a few immaterial differences that do not affect the auditor's opinion.

(2 marks)

1.4 The trial balance of EH at 31 October 2007 showed trade receivables of $82,000 before adjustments.

On 1 November 2007 EH discovered that one of its customers had ceased trading and was very unlikely to pay any of its outstanding balance of $12,250.

On the same date EH carried out an assessment of the collectability of its other trade receivable balances. Using its knowledge of its customers and past experience EH determined that the remaining trade receivables had suffered a 3% impairment at 31 October 2007.

What is EH's balance of trade receivables, as at 31 October 2007?

A $66,202

B $67,290

C $67,657

D $79,540

(2 marks)

1.5 EX is preparing its cash forecast for the next three months.

Which ONE of the following items should be left out of its calculations?

A Expected gain on the disposal of a piece of land.

B Tax payment due, that relates to last year's profits.

C Rental payment on a leased vehicle.

D Receipt of a new bank loan raised for the purpose of purchasing new machinery.

(2 marks)

Section A continues on the next page

TURN OVER

1.6 The following details relate to EA:

- Incorporated in Country A.
- Carries out its main business activities in Country B.
- Its senior management operate from Country C and effective control is exercised from Country C.

Assume countries A, B and C have all signed double tax treaties with each other, based on the OECD model tax convention.

Which country will EA be deemed to be resident in for tax purposes?

A Country A

B Country B

C Country C

D Both Countries B and C

(2 marks)

1.7 Treasury shares are defined as

A equity shares sold by an entity in the period.

B equity shares repurchased by the issuing entity, not cancelled before the period end.

C non-equity shares sold by an entity in the period.

D equity shares repurchased by the issuing entity and cancelled before the period end.

(2 marks)

1.8 EE reported accounting profits of $822,000 for the period ended 30 November 2007. This was after deducting entertaining expenses of $32,000 and a donation to a political party of $50,000, both of which are disallowable for tax purposes.

EE's reported profit also included $103,000 government grant income that was exempt from taxation. EE paid dividends of $240,000 in the period.

Assume EE had no temporary differences between accounting profits and taxable profits.

Assume that a classical tax system applies to EE's profits and that the tax rate is 25%.

What would EE's tax payable be on its profits for the year to 30 November 2007?

(2 marks)

1.9 EG purchased a property for $630,000 on 1 September 2000. EG incurred additional costs for the purchase of $3,500 surveyors' fees and $6,500 legal fees. EG then spent $100,000 renovating the property prior to letting it. All of EG's expenditure was classified as capital expenditure according to the local tax regulations.

Indexation of the purchase and renovation costs is allowed on EE's property. The index increased by 50% between September 2000 and October 2007. Assume that acquisition and renovation costs were incurred in September 2000. EG sold the property on 1 October 2007 for $1,250,000, incurring tax allowable costs on disposal of $2,000.

Calculate EG's tax due on disposal assuming a tax rate of 30%.

(3 marks)

1.10 A government wanted to encourage investment in new non-current assets by entities and decided to change tax allowances for non-current assets to give a 100% first year allowance on all new non-current assets purchased after 1 January 2005.

ED purchased new machinery for $400,000 on 1 October 2005 and claimed the 100% first year allowance. For accounting purposes ED depreciated the machinery on the reducing balance basis at 25% per year. The rate of corporate income tax to be applied to ED's taxable profits was 22%.

Assume ED had no other temporary differences.

Calculate the amount of deferred tax that ED would show in its balance sheet at 30 September 2007.

(3 marks)

1.11 EP sells refrigerators and freezers and provides a one year warranty against faults occurring after sale.

EP estimates that if all goods with an outstanding warranty at the balance sheet date need minor repairs the total cost would be $3 million. If all the products under warranty needed major repairs the total cost would be $12 million.

Based on previous years' experience, EP estimates that 85% of the products will require no repairs; 14% will require minor repairs and 1% will require major repairs.

Calculate the expected value of the cost of the repair of goods with an outstanding warranty at the balance sheet date.

(3 marks)

1.12 List FOUR advantages of forfaiting for an exporter.

(4 marks)

1.13 A bond has a coupon rate of 7%. It will repay its face value of $1,000 at the end of six years. The market expects this type of bond to have a yield to maturity of 10%.

What is the current market value of the bond?

(4 marks)

Section A continues on the next page

TURN OVER

1.14 EB has an investment of 25% of the equity shares in XY, an entity resident in a foreign country.

EB receives a dividend of $90,000 from XY, the amount being after the deduction of withholding tax of 10%.

XY had profits before tax for the year of $1,200,000 and paid corporate income tax of $200,000.

How much underlying tax can EB claim for double taxation relief?

(3 marks)

1.15 EV had inventory days outstanding of 60 days and trade payables outstanding of 50 days at 31 October 2007.

EV's inventory balance at 1 November 2006 was $56,000 and trade payables were $42,000 at that date.

EV's cost of goods sold comprises purchased goods cost only. During the year to 31 October 2007, EV's cost of goods sold was $350,000.

Assume purchases and sales accrue evenly throughout the year and use a 365 day year. Further assume that there were no goods returned to suppliers and EV claimed no discounts.

Calculate how much EV paid to its credit suppliers during the year to 31 October 2007.

(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)

On 1 September 2007, the Directors of EK decided to sell EK's retailing division and concentrate activities entirely on its manufacturing division.

The retailing division was available for immediate sale, but EK had not succeeded in disposing of the operation by 31 October 2007. EK identified a potential buyer for the retailing division, but negotiations were at an early stage. The Directors of EK are certain that the sale will be completed by 31 August 2008.

The retailing division's carrying value at 31 August 2007 was:

	$000
Non-current tangible assets – property, plant and equipment	300
Non-current tangible assets – goodwill	100
Net current assets	43
Total carrying value	443

The retailing division has been valued at $423,000, comprising:

	$000
Non-current tangible assets – property, plant and equipment	320
Non-current tangible assets – goodwill	60
Net current assets	43
Total carrying value	423

EK's directors have estimated that EK will incur consultancy and legal fees for the disposal of $25,000.

Required:

(i) Explain whether EK can treat the sale of its retailing division as a "discontinued operation", as defined by IFRS 5 *Non-current Assets held for Sale and Discontinued Operations*, in its financial statements for the year ended 31 October 2007.

(3 marks)

(ii) Explain how EK should treat the retailing division in its financial statements for the year ended 31 October 2007, assuming the sale of its retailing division meets the classification requirements for a disposal group (IFRS 5).

(2 marks)

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

(b)

EF is an importer and imports perfumes and similar products in bulk. EF repackages the products and sells them to retailers. EF is registered for Value Added Tax (VAT).

EF imports a consignment of perfume priced at $10,000 (excluding excise duty and VAT) and pays excise duty of 20% and VAT on the total (including duty) at 15%.

EF pays $6,900 repackaging costs, including VAT at 15% and then sells all the perfume for $40,250 including VAT at 15%.

EF has not paid or received any VAT payments to/from the VAT authorities for this consignment.

Required:

(i) Calculate EF's net profit on the perfume consignment.

(ii) Calculate the net VAT due to be paid by EF on the perfume consignment.

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

(c)

The trade receivables ledger account for customer X is as follows:

		Debits	*Credits*	*Balance*
01-Jul-07	Balance b/fwd			162
12-Jul-07	Invoice AC34	172		334
14-Jul-07	Invoice AC112	213		547
28-Jul-07	Invoice AC215	196		743
08-Aug-07	Receipt RK 116 (Balance + AC34)		334	409
21-Aug-07	Invoice AC420	330		739
03-Sep-07	Receipt RL162 (AC215)		196	543
12-Sep-07	Credit note CN92 (AC112)		53	490
23-Sep-07	Invoice AC615	116		606
25-Sep-07	Invoice AC690	204		810
05-Oct-07	Receipt RM223 (AC420)		330	480
16-Oct-07	Invoice AC913	233		713
25-Oct-07	Receipt RM360 (AC615)		116	597

Required:

(i) Prepare an age analysis showing the outstanding balance on a monthly basis for customer X.

(3 marks)

(ii) Explain how an age analysis of receivables can be useful to an entity.

(2 marks)

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

TURN OVER

(d)

EJ publishes trade magazines and sells them to retailers. EJ has just concluded negotiations with a large supermarket chain for the supply of a large quantity of several of its trade magazines on a regular basis.

EJ has agreed a substantial discount on the following terms:

- The same quantity of each trade magazine will be supplied each month;
- Quantities can only be changed at the end of each six month period;
- Payment must be made six monthly in advance.

The supermarket paid $150,000 on 1 September 2007 for six months supply of trade magazines to 29 February 2008. At 31 October 2007, EJ had supplied two months of trade magazines. EJ estimates that the cost of supplying the supermarket each month is $20,000.

Required:

(i) State the criteria in IAS 18 *Revenue Recognition* for income recognition.

(2 marks)

(ii) Explain, with reasons, how EJ should treat the above in its financial statements for the year ended 31 October 2007.

(3 marks)

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

(e)

The objective of IAS 24 *Related Party Disclosures* is to ensure that financial statements disclose the effect of the existence of related parties.

Required:

With reference to *IAS 24,* explain the meaning of the terms “related party” and “related party transaction”.

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

(f)

ES estimates from its cash flow forecast that it will have $120,000 to invest for 12 months.

ES is considering the following investments:

(i) Purchase of fixed term bonds issued by a "blue chip" entity quoted on the local stock exchange. The bonds have a maturity date in 12 months' time and pay 12·5% interest on face value. The bonds will be redeemed at face value in 12 months' time. ES will incur commission costs on purchasing the bonds of 1% of cost. The bonds are currently trading at $102 per $100.

(ii) An internet bank is offering a deposit account that pays interest on a monthly basis at 0·8% per month.

Required:

Identify which is the most appropriate investment for the year, giving your reasons.

(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

EY is an office and industrial furniture manufacturing entity that specialises in developing and using new materials and manufacturing processes in the production of its furniture.

The balance sheet below relates to the previous year, 31 October 2006, which is followed by a summary of EY's cash book for the year to 31 October 2007.

EY Balance Sheet at 31 October 2006

	$000	*$000*	*$000*
Non-current assets			
Development costs – cost	1,000		
– amortisation	200	800	
Property, plant and equipment – cost	7,300		
– depreciation	1,110	6,190	6,990
Current assets			
Inventory	1,200		
Trade receivables	753		
Cash and cash equivalents	82		
			2,035
			9,025
Equity and liabilities			
Equity			
Share capital		3,000	
Revaluation reserve		600	
Retained earnings		1,625	
			5,225
Non-current liabilities			
Loan notes	2,260		
Deferred tax	180		
		2,440	
Current liabilities			
Trade and other payables	573		
Tax payable	670		
Interest payable	117		
		1,360	
Total liabilities			3,800
			9,025

EY's summarised cash book for the year ended 31 October 2007

	Note	*Receipts/(Payments) $000*
Cash book balance at 1 November 2006		82
Expenditure incurred on government contract	(i)	(600)
Interest paid during the year	(ii)	(160)
Administration expenses paid		(500)
Research and development costs	(iii)	(1,600)
Income tax	(iv)	(690)
Purchase cost of property, plant and equipment	(v)	(3,460)
Final dividend of 25c per share for year ended 31 October 2006		(750)
Receipt for disposal of land	(vi)	1,200

Summarised cash book continued:

Cash received from customers	7,500
Payments to suppliers of production materials, wages and other production costs	(3,000)
Distribution and selling costs	(730)
Cash received from increase in loan notes	2,500
Cash book balance at 31 October 2007	(208)

Notes:

(i) The government contract is a long-term project for the supply of a new type of seating for government offices involving the development of new materials. The total contract value is $1,400,000. The expenditure includes all costs incurred during the first year of the contract. The project leader is confident that the remainder of the work will cost no more than $400,000. The contract provides that EY can charge for the proportion of work completed by 31 October each year. The percentage of cost incurred to total cost should be used to apportion profit/losses on the contract.

(ii) Interest outstanding at 31 October 2007 was $130,000.

(iii) During the year EY spent $1,600,000 on research and development. This comprised three projects:

- Cost in the year $300,000 – Funded research projects carried out at the local university;
- Cost in the year $500,000 – Development of a new type of laminate expected to be a very profitable product line. The final development phase has just finished, and production of the laminate is expected from January 2008.
- Cost in the year $800,000 – Development of a new type of artificial wood, to replace real wood in some furniture and help reduce EY's use of wood. The development produced a good substitute for wood, but was five times more expensive and hence not viable.

Capitalised development expenditure is amortised on the straight line basis over five years and treated as a cost of sale.

(iv) Income tax due for the year was estimated by EY at $420,000.

(v) The property, plant and equipment balance at 31 October 2006 was made up as follows:

	Land	*Premises*	*Plant & equipment*	*Total*
	$000	*$000*	*$000*	*$000*
Cost/valuation	2,000	1,500	3,800	7,300
Depreciation	0	350	760	1,110
Net book value	2,000	1,150	3,040	6,190

During the year EY purchased new premises at a cost of $1,600,000, and new plant and equipment for $1,860,000. Premises are depreciated on the straight line basis at 6% per year, and plant and machinery are depreciated on the reducing balance at 15% per year and are treated as a cost of sale. EY charges a full year's depreciation in the year of acquisition. No assets were fully depreciated at 31 October 2006.

(vi) Land originally costing $600,000, which had previously been revalued to $1,000,000 was sold during the year for $1,200,000.

(vii) A bonus issue of shares was made on the basis of one new share for every six shares held.

(viii) Deferred tax is to be increased by $42,000.

(ix) Balances at 31 October 2007 included:

trade receivables	$620,000;
outstanding trade payables	$670,000;
inventory	$985,000.

The question requirement is on page 15, which is detachable for ease of reference.

TURN OVER

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Question Three (continued from page 13)

Required:

Prepare the income statement and a statement of changes in equity for the year to 31 October 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)

Notes to the financial statements are NOT required, but all workings must be clearly shown. Do NOT prepare a statement of accounting policies.

(Total for Question Three = 30 marks)

End of Question Paper

Maths Tables and Formulae are on pages 17-19

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

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

FORMULAE

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

$$EOQ = \sqrt{\frac{2C_oD}{C_h}}$$

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	Make a list of
	State	Express, fully or clearly, the details of/facts of
	Define	Give the exact meaning of
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 of
	Identify	Recognise, establish or select after consideration
	Illustrate	Use an example to describe or explain something
3 APPLICATION		
How you are expected to apply your knowledge.	Apply	To put to practical use
	Calculate/compute	To ascertain or reckon mathematically
	Demonstrate	To prove with certainty or to exhibit by practical means
	Prepare	To make or get ready for use
	Reconcile	To make or prove consistent/compatible
	Solve	Find an answer to
	Tabulate	Arrange in a table
4 ANALYSIS		
How you are 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	To build up or compile
	Discuss	To examine in detail by argument
	Interpret	To translate into intelligible or familiar terms
	Produce	To create or bring into existence
5 EVALUATION		
How you are expected to use your learning to evaluate, make decisions or recommendations.	Advise	To counsel, inform or notify
	Evaluate	To appraise or assess the value of
	Recommend	To advise on a course of action

Financial Management Pillar

Managerial Level

P7 – Financial Accounting and Tax Principles

November 2007

Thursday Afternoon Session