École de gestion TELFER School of Management

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Mid Term Exam
Intermediate Financial Accounting II
Fall 2010
ADM3340

(SUGGESTED SOLUTIONS)

Name: _____ **ID#:** _____

Instructions:

- Write your name and student ID number above.
- Turn off all cell phones.
- This examination "SUGGESTED SOLUTION" comprises **3** questions over 13 numbered pages. Answer all questions in this booklet. Booklet is **not** to be removed from the examination room. You may not separate the pages.
- Limit your answer to the space provided. Blank sheets for rough work and supporting calculations are given at the end of each question.
- This exam will be marked out of 75 marks (for convenience) and is 2½ hours long. You should budget approximately 2 minutes per mark. The exam is worth 40% of the overall course mark.
- Please do not ask the invigilator or the professor any questions, as they will not be answered. State reasonable assumptions, if you feel they are necessary.
- Present value tables are provided on pages 12/13.
- Language (non-electronic) dictionaries are allowed.
- You ***must*** sign the Statement of Academic integrity on page 2 of this exam.

Question		Marks
1: part 1	Financial instruments classification	/3
1: part 2	Equity: FV/OCI	/8
1: part 3	Debt: FV/NI	/8
1: part 4	Equity method	/8
2: part 1	ARO	/7
2: part 2	Compensated absences	/7
2: part 3	Bond liabilities	/7
2: part 4	Bond liabilities	/7
2: part 5	Bond liabilities	/7
3: part 1	Terminology	/3
3: part 2	Stock dividend	/3
3: part 3	Basket issuance	/3
3: part 4	Treasury stock	/4
TOTAL		/75

Statement of Academic Integrity
The Telfer School of Management does not condone academic fraud, an act by a student that may result in a false academic evaluation of that student or of another student. Without limiting the generality of this definition, academic fraud occurs when a student commits any of the following offences: plagiarism or cheating of any kind, use of books, notes, mathematical tables, dictionaries or other study aid unless an explicit written note to the contrary appears on the exam, to have in his/her possession cameras, radios (radios with head sets), tape recorders, pagers, cell phones, or any other communication device which has not been previously authorized in writing.

Statement to be signed by the student:
I have read the text on academic integrity and I pledge not to have committed or attempted to commit academic fraud in this examination.

Signed:_____

Note: an examination copy or booklet without that signed statement will not be graded and will receive an exam grade of zero.

QUESTION 1 (27 marks)

Answer ALL parts to this question. Each part is independent.

PART 1: (3 marks)

Question 1

1. A bond that will mature in four years was bought one month ago when the price dropped. As soon as the value increases, which is expected next month, it will be sold.

2. Ten percent of the outstanding shares of Farm Corp. were purchased. The company is planning on eventually getting a total of 30% of the outstanding shares.

3. Ten-year bonds were purchased this year. The bonds mature on January 1 of next year.

4. Bonds that will mature in five years are purchased. The company would like to hold them until they mature, but money has been tight recently and the bonds may need to be sold.

5. A bond that matures in 10 years was purchased with money that the company has set aside for an expansion project that is planned for 10 years from now.

6. Preferred shares were purchased for their constant dividend. The company is planning to hold the preferred shares for a long time.

Required
Each of the securities above is independent of the others and active quoted markets exist for the securities. Identify, in the table below, the best accounting model classification(s) [Amortized Cost; Cost, FV/NI; FV/OCI], according to IFRS 9 for each of the securities described above.

	IFRS 9	**ASPE (not asked in the exam)**
1.	**Fair value through net income (FV-NI)** security since the company's intent is to manage the changing fair values and sell the bonds as soon as the value increases.	same
2.	**Fair value through other comprehensive income (FV-OCI) security**. [When the company acquires 20% or more, and if significant influence over Farm Corp. exists, the investment will be reclassified to an equity investment.	Fair value through net income (FV-NI). (ASPE does not have an FV-OCI option.)
3.	**Fair value through net income (FV-NI).**	Amortized cost, unless the company chooses the fair value through net income (FV-NI) model option. (ASPE does not have an FV-OCI option.)
4.	**Fair value through net income (FV-NI) security**. (Under IFRS 9, FV-OCI investments normally will be limited to equity investments in other companies.)	Amortized cost, unless the company chooses the fair value through net income (FV-NI) model option. (ASPE does not have a FV-OCI option.)
5.	**Cost/amortized cost model** security as it appears the company's intent is to manage the stated cash flows and hold the bonds until maturity.	Amortized cost, unless the company chooses the fair value through net income (FV-NI) model option.
6.	**Fair value through net income (FV-NI).**	Fair value through net income (FV-NI) assuming that the equity investment is quoted in an active market.

Question 1 (27 marks) (continued)

PART 2: (8 marks)

In September 2010 Jessup Corp. acquired 10,000 preferred shares in Gielow Corp. The investment is *not* considered significant and was accounted for under the fair value to other comprehensive income [FV/OCI] model (as per current IFRS). After the adjustments at Jessup Corp.'s December 31, 2010 accounting year-end the balance in the Investment in Gielow Corp account was $200,000 and the balance in the AOCI account "Unrealized holding gain on Gielow Corp" was a credit of $12,625. Jessup sells the Gielow Co. shares on January 31, 2011 for $235,200.

Instructions
a) Prepare the entries to record the sale on January 31, 2011, using FV/OCI with recycling.
b) Prepare the entries to record the sale on January 31, 2011, using FV/OCI without recycling.

FV/OCI with recycling

Investment in Gielow Corp……	35,200	
Holding gain on Gielow Corp (OCI).....		35,200
Cash.....	235,200	
.....Investment in Gielow Corp		235,200
Holding gain on Gielow Corp (OCI)	47,825	
..... Gain on sale of Gielow Corp		47,825
(47,825 = 12,625 + 35,200)		

Or

FV/OCI without recycling

Investment in Gielow Corp……	35,200	
Holding gain on Gielow Corp (OCI).....		35,200
Cash.....	235,200	
.....Investment in Gielow Corp		235,200
Holding gain on Gielow Corp (OCI)	47,825	
.....Retained Earnings		47,825
(47,825 = 12,625 + 35,200)		

Question 1 (27 marks) (continued)

PART 3: (8 marks)

On January 1, 2011, Houseman Company paid $108,425 to acquire $100,000 face value 8% bonds of Lamont Corporation to yield 6%. The bonds were dated January 1, 2011, and mature on December 31, 2015, with interest payable each January 1. The bonds had a fair value of $110,000 on December 31, 2011.

Instructions
Assuming the FV/NI model is applied, prepare the following entries in the books of Houseman:
(a) Acquisition of bonds on January 1, 2011
(b) The year-end adjusting entries at December 31, 2011
(c) The receipt of the first interest payment on January 1, 2012

(a) Acquisition of bonds on January 1, 2011

Investment in Lamont Corp Bonds	108,425	
Cash.....		108,425

(b) The year-end adjusting entries at December 31, 2011

Interest receivable	8,000	
.....Investment in Lamont Corp Bonds		1,495
Interest income.....		6,505

$100,000 x 8% = $8,000
$108,425 x 6% = $6,505
$8,000 - $6,505 = $1,495

Investment in Lamont Corp Bonds……	3,070	
Gain on Investment in Lamont Corp Bonds		3,070

[3,070 = 110,000 – (108,425 – 1,495)] = [3,070 = 110,000 – (106,930)]

(c) Receipt of first interest payment on Jan-1-2012

Cash.....	8,000	
.....Interest receivable		8,000

Question 1 (27 marks) (continued)

PART 4: (8 marks)

On January 1, 2011, Jenna Limited purchased 2,500 shares (25%) of the common shares of Novotna Corp. for $355,000. Jenna uses the equity method to account for this investment. At the date of acquisition, the following additional information relates to the identifiable assets and liabilities of Novotna:

	Carrying Amount	Fair Value
Assets not subject to depreciation	$ 500,000	$ 500,000
Assets subject to depreciation (10 years remaining)	800,000	860,000
Total identifiable assets	1,300,000	1,360,000
Liabilities	100,000	100,000

During 2011 Novotna reported the following information on its income statement:

Income before discontinued operations	$200,000
Discontinued operations (net of tax)	70,000
Net income	270,000
Dividends declared and paid by Novotna during 2011	120,000

Required
Prepare all journal entries Jenna should make in 2011 regarding its investment in the Novotna shares.

(a) Investment in Novotna Corp. 355,000
Cash..... 355,000

(b) Cost of investment $355,000
Carrying amount
Assets $1,300,000
Liabilities 100,000
1,200,000
X 25% 300,000
Cost in excess of
share of carrying amount $ 55,000

Allocated
Assets subject to depreciation
[($860,000 – $800,000) X 25%] $15,000
Goodwill 40,000
$55,000

Cash ($120,000 X .25) 30,000
Investment in Novotna Corp. 30,000

Investment in Novotna Corp. 67,500
Investment Income (ordinary)..... 50,000**
Investment Income (disc. operations) 17,500**

**$200,000 X .25
**$70,000 X .25

Investment Income (ordinary)..... 1,500
Investment in Novotna Corp. 1,500

Undervalued depreciable assets ($15,000 ÷ 10) = $1,500
Goodwill is not amortized, but rather is tested on an annual basis for impairment.

QUESTION 2 (35 marks)

Answer ALL parts to this question. Each part is independent.

PART 1: (7 marks)

Nckel Mines International Ltd discovered a new bauxite deposit, the Flamingo Mine in Northern Ontario, and began production on January 1, 2011. The province requires mining companies to return the land to its natural state at the end of mining activity. Nickel Mines International Ltd estimates that it will operate the mine for 25 years, at which time it will cost $25,000,000 for the land reclamation project. Nickel Mines International Ltd uses an 8% discount rate. The company follows Canada's Accounting Standards for Private Enterprises.

Instructions

(a) Record any obligation for land reclamation as at January 1, 2011.
(b) Record any entry required related to this obligation at December 31, 2011.

(a) January 1, 2011

Flamingo Mine	3,650,447	
Asset Retirement Obligation		3,650,447

$3,650,447 is the present value of the $25,000,000 estimated cost discounted for 25 years at 8%.

(b) December 31, 2011

Accretion Expense	292,036	
Asset Retirement Obligation		292,036

$292,036 is the increase in the present value that occurs because you are one year closer to the expenditure. Present value of $25,000,000 discounted for 24 years at 8% ($3,942,483) less $3,650,447.
OR 3,650,447 x 8% = 292,036

PART 2: (7 marks)

Ponting Ltd. began operations on January 2, 2011. The company employs 15 people who work 8-hour days. Each employee earns 10 paid-vacation days annually. Vacation days may be taken after January 10 of the year following the year in which they are earned. The average hourly wage rate was $12.00 in 2011 and $12.75 in 2012. The average vacation days used by each employee in 2012 was 9. Ponting accrues the cost of compensated absences at rates of pay in effect when earned.

Instructions

Prepare journal entries to record the transactions related to paid-vacation days during 2011 and 2012.

2011	Wages Expense	14,400	(1)	
	Vacation Wages Payable			14,400

(1) 15 × 8 × $12.00 = $1,440; $1,440 × 10 = $14,400.

2012	Wages Expense	810		
	Vacation Wages Payable	12,960	(2)	
	Cash			13,770 (3)
	Wages Expense	15,300	(4)	
	Vacation Wages Payable			15,300
	Wages Expense	1,350	(5)	
	Vacation Wages Payable			1,350

(2) $1,440 × 9 = $12,960.

(3) 15 × 8 × $12.75 = $1,530; $1,530 × 9= $13,770.

(4) $1,530 × 10 = $15,300.

(5) ($1,530 - $1,440) × (10 – 9 days) x 15 = $1,350.

Question 2 (35 marks) (continued)

PART 3: (7 marks)

On November 1, 2011 BondBeagle Inc. issues $1,500,000 face value bonds. The bond date is February 1, 2011, and the bonds carry a coupon rate of 4% per year, payable semi-annually on January 31 and July 31. The bonds' maturity date is January 31, 2021. The bonds are sold to provide an annual yield of 6%.

BondBeagle Inc. uses the effective interest rate method to amortize any bond premium or discount. BondBeagle Inc.'s accounting year-end is August 31.

Instructions

Present the journal entry to record the issuance of the bonds: show all supporting calculations.

November 01, 2011 Date of issuance	Dr	Cr
Bond discount	210,580.00	
Cash	1,304,420.00	
Interest payable		15,000.00
Bonds payable		1,500,000.00
To record the issuance of 10.00-year bonds, face value $1,500,000, stated interest rate 4.0000% per annum.		
The bond date is February 01, 2011 with interest paid semi-annually.		
There are 111 months (including 19 interest payments) between the bond's issuance and maturity dates.		
For details of how this journal entry's amounts are determined, please refer to the ISSUANCE_CALC sheet.		

The following table is not required in your solution:

	If the bonds were issued on:	
	July 31, 2011	January 31, 2012
	There would be 19 semi-annual interest payments (114 months) between July 31, 2011 and the maturity date, January 31, 2021	There would be 18 semi-annual interest payments (108 months) between January 31, 2012 and the maturity date, January 31, 2021
Present value of the bond's 19.00 semi-annual interest payments of $30,000 (= $1,500,000 x 4.0000%/2) at 3.0000% effective interest rate [$429,714 = 14.3238 x $30,000]	429,714.00	
Present value of the maturity value of $1,500,000 at the end of 19.00 periods at 3.0000% effective interest rate [$855,435 = 0.57029 x $1,500,000]	855,435.00	
Present value of the bond's 18.00 semi-annual interest payments of $30,000 (= $1,500,000 x 4.0000%/2) at 3.0000% effective interest rate [$412,605 = 13.75351 x $30,000]		412,605.30
Present value of the maturity value of $1,500,000 at the end of 18.00 periods at 3.0000% effective interest rate [$881,085 = 0.58739 x $1,500,000]		881,085.00
Total	1,285,149.00	1,293,690.30
Bond proceeds, excluding any accrued interest and issuance costs, on November 01, 2011 (which lies between July 31, 2011 and January 31, 2012). $1,289,420 = $1,285,149 + {[($1,293,690 - $1,285,149)/6months] x 3months}	1,289,419.65	

Question 2 (35 marks) (continued)

PART 4: (7 marks)

On May 31, 2011 Tendulkar Incorporated issues $1,000,000 face value bonds. The bond date is March 30, 2011, and the bonds carry a coupon rate of 6% per year, payable semi-annually on March 31 and September 30. The bonds' maturity date is March 30, 2031. Proceeds upon issuance, excluding accrued interest, were $657,769 and the bonds provide an annual yield of 10%.

Tendulkar Inc. uses the effective interest rate method to amortize any bond premium or discount. Tendulkar Inc.'s accounting year-end is October 31.

Required:
Present the journal entry for these bonds on October 31, 2012.

To answer this question you must first determine the amortized cost (carrying value) of the bond at September 30, 2012 (shown as $665,774 below).

2012	3
2013-2030	216 (18yrs x 12)
2031	3
	222 months

222/6 = 37 periods

30 Sept 2012 to 30 March 2031: 37 interest payment periods (does not include 30 Sept 2012)

$30,000 x 16.711287 =	$ 510,339
$1,000,000 x 0.1644356 =	164,435
Amortized cost at Sept 30, 2012 =	$665,774 (rounded)

October 31, 2012 — The second accounting year-end after the issuance date	Dr	Cr	
Interest expense	5,548.12		= $665,774 (see amortization table's semi-annual period 4) x 5.0000% (semi-annual yield) x 1/6 months
Bond discount		548.12	= $5,548 - $5,000
Interest payable		5,000.00	= $1,000,000 x 1/12 months x 6.0000%
To record bond interest expense incurred between September 30, 2012 (the third interest payment date after the issuance date) and October 31, 2012. Effective interest rate method.			

PART 5: (7 marks)

On August 1, 2009, Laxman Inc sold 8%, five year bonds with a maturity value of $1,000,000 for $982,000. Interest on the bonds is payable semi-annually on August 1 and February 1. The bonds are callable at 104 at any time after August 1, 2011. By October 1, 2011, the market rate of interest had declined and the market price of Laxman's bonds had risen to 102. The company decides to refund the bonds by selling a new 6% bond issue to mature in five years. Laxman begins to reacquire its 8% bonds in the market and is able to purchase $300,000 face value at 102. The remainder of the outstanding bonds are acquired by exercising the bonds' call feature.

Instructions
How much is Laxman's total gain or loss in reacquiring its 8% bonds? Assume the company uses straight-line amortization. Show calculations.

Reacquisition price:		
$300,000 × 1.02 =	$306,000	
$700,000 × 1.04 =	728,000	$1,034,000
Less carrying value:		
$982,000 + ($18,000 × 26/60) =		989,800
Loss on redemption		$ 44,200

QUESTION 3 (13 marks)

Answer ALL parts to this question. Each part is independent.

PART 1: (3 marks)

Required:

Match the following terms to the definitions given in the table below by entering the appropriate letter in the left column. Each term may be used more than once or not at all.

Terms

A. Stock dividend
B. Liability dividend
C. Property dividend
D. Cash dividend
E. None of these.

Definitions

1.	Issuance of additional shares to each shareholder at no cost.
2.	Issuance of a dividend that decreases both retained earnings and noncash assets.
3.	Issuance of a stock split.
4.	A dividend that does not change total assets, liabilities, or shareholders' equity.
5.	A dividend that decreases cash and shareholders' equity when declared and paid.
6.	A dividend that decreases retained earnings and increases contributed capital.

Answer:

1:A, 2:C, 3:A or E, 4:A, 5:D, 6:A

PART 2: (3 marks)

On July 1, 2011, the Board of Directors of Dhoni Limited declared and distributed a stock dividend that required the issuance of 5,000 common shares. The common shares had a market value at this date of $18 per share. Retained earnings amounted to $900,000.

Required:
Record the journal entry to record the stock dividend, assuming the 5,000 shares represented 10% of the previously outstanding shares.

Answer:

Retained Earnings	*90,000*	
Common Shares (5,000 x $18)		*90,000*

Question No. 3 (13 marks) (continued)

PART 3: (3 marks)

Bulawayo Corp. issued 5,000 common shares, no par, and 800 preferred shares. At the time of issue the common shares were selling at $30 per. There is no current market value for the preferred shares. Total cash received was $162,000.

Required:
Prepare the journal entry to record the issuance of the shares.

Answer: (incremental method must be used since the market value for the preferred shares is not known)

Cash	*162,000*	
Common shares		*150,000*
Preferred shares (plug)		*12,000*

PART 4: (4 marks)

On January 1, 2011, Warne Corporation was incorporated and issued 5,000 no-par common shares for $14 per share. On February 4, 2011 Warne purchased 10% of its common shares at $16.50 per share to be held as treasury stock. On April 15, 2011 Warne resold 200 treasury shares at $18 per share. An additional 100 treasury shares were resold on April 20, 2011 at $19 per share. The balance of the treasury shares was resold on April 30, 2011 for $13 per share.

Required:
Prepare the journal entry to record the sale on April 30, 2011. Show supporting computations.

Answer:

April 30, 2011:

Cash (200 x $13/share)	*2,600*	
Contributed capital – TS retirement ($300 + $250**)*	*550*	
Retained earnings ($3,300 – $2,600 – $550)	*150*	
Treasury stock (200 x $16.50)		*3,300*

* $300 = 200 x ($18 - $16.50)
** $200 = 100 x ($19 - $16.50)

Financial Tables

Table 2: PRESENT VALUE of $1.00 that is received in the future.

Period/Per	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.9900990	0.9803922	0.9708738	0.9615385	0.9523810	0.9433962	0.9345794	0.9259259	0.9174312	0.9090909	0.9009009	0.8928571
2	0.9802960	0.9611688	0.9425959	0.9245562	0.9070295	0.8899964	0.8734387	0.8573388	0.8416800	0.8264463	0.8116224	0.7971939
3	0.9705901	0.9423223	0.9151417	0.8889964	0.8638376	0.8396193	0.8162979	0.7938322	0.7721835	0.7513148	0.7311914	0.7117802
4	0.9609803	0.9238454	0.8884870	0.8548042	0.8227025	0.7920937	0.7628952	0.7350299	0.7084252	0.6830135	0.6587310	0.6355181
5	0.9514657	0.9057308	0.8626088	0.8219271	0.7835262	0.7472582	0.7129862	0.6805832	0.6499314	0.6209213	0.5934513	0.5674269
6	0.9420452	0.8879714	0.8374843	0.7903145	0.7462154	0.7049605	0.6663422	0.6301696	0.5962673	0.5644739	0.5346408	0.5066311
7	0.9327181	0.8705602	0.8130915	0.7599178	0.7106813	0.6650571	0.6227497	0.5834904	0.5470342	0.5131581	0.4816584	0.4523492
8	0.9234832	0.8534904	0.7894092	0.7306902	0.6768394	0.6274124	0.5820091	0.5402689	0.5018663	0.4665074	0.4339265	0.4038832
9	0.9143398	0.8367553	0.7664167	0.7025867	0.6446089	0.5918985	0.5439337	0.5002490	0.4604278	0.4240976	0.3909248	0.3606100
10	0.9052870	0.8203483	0.7440939	0.6755642	0.6139133	0.5583948	0.5083493	0.4631935	0.4224108	0.3855433	0.3521845	0.3219732
11	0.8963237	0.8042630	0.7224213	0.6495809	0.5846793	0.5267875	0.4750928	0.4288829	0.3875329	0.3504939	0.3172833	0.2874761
12	0.8874492	0.7884932	0.7013799	0.6245970	0.5568374	0.4969694	0.4440120	0.3971138	0.3555347	0.3186308	0.2858408	0.2566751
13	0.8786626	0.7730325	0.6809513	0.6005741	0.5303214	0.4688390	0.4149644	0.3676979	0.3261786	0.2896644	0.2575143	0.2291742
14	0.8699630	0.7578750	0.6611178	0.5774751	0.5050680	0.4423010	0.3878172	0.3404610	0.2992465	0.2633313	0.2319948	0.2046198
15	0.8613495	0.7430147	0.6418619	0.5552645	0.4810171	0.4172651	0.3624460	0.3152417	0.2745380	0.2393920	0.2090043	0.1826963
16	0.8528213	0.7284458	0.6231669	0.5339082	0.4581115	0.3936463	0.3387346	0.2918905	0.2518698	0.2176291	0.1882922	0.1631217
17	0.8443775	0.7141626	0.6050164	0.5133732	0.4362967	0.3713644	0.3165744	0.2702690	0.2310732	0.1978447	0.1696326	0.1456443
18	0.8360173	0.7001594	0.5873946	0.4936281	0.4155207	0.3503438	0.2958639	0.2502490	0.2119937	0.1798588	0.1528222	0.1300396
19	0.8277399	0.6864308	0.5702860	0.4746424	0.3957340	0.3305130	0.2765083	0.2317121	0.1944897	0.1635080	0.1376776	0.1161068
20	0.8195445	0.6729713	0.5536758	0.4563869	0.3768895	0.3118047	0.2584190	0.2145482	0.1784309	0.1486436	0.1240339	0.1036668
21	0.8114302	0.6597758	0.5375493	0.4388336	0.3589424	0.2941554	0.2415131	0.1986557	0.1636981	0.1351306	0.1117423	0.0925596
22	0.8033962	0.6468390	0.5218925	0.4219554	0.3418499	0.2775051	0.2257132	0.1839405	0.1501817	0.1228460	0.1006687	0.0826425
23	0.7954418	0.6341559	0.5066917	0.4057263	0.3255713	0.2617973	0.2109469	0.1703153	0.1377814	0.1116782	0.0906925	0.0737880
24	0.7875661	0.6217215	0.4919337	0.3901215	0.3100679	0.2469785	0.1971466	0.1576993	0.1264049	0.1015256	0.0817050	0.0658821
25	0.7797684	0.6095309	0.4776056	0.3751168	0.2953028	0.2329986	0.1842492	0.1460179	0.1159678	0.0922960	0.0736081	0.0588233
26	0.7720480	0.5975793	0.4636947	0.3606892	0.2812407	0.2198100	0.1721955	0.1352018	0.1063925	0.0839055	0.0663136	0.0525208
27	0.7644039	0.5858620	0.4501891	0.3468166	0.2678483	0.2073680	0.1609304	0.1251868	0.0976078	0.0762777	0.0597420	0.0468936
28	0.7568356	0.5743746	0.4370768	0.3334775	0.2550936	0.1956301	0.1504022	0.1159137	0.0895484	0.0693433	0.0538216	0.0418693
29	0.7493421	0.5631123	0.4243464	0.3206514	0.2429463	0.1845567	0.1405628	0.1073275	0.0821545	0.0630394	0.0484879	0.0373833
30	0.7419229	0.5520709	0.4119868	0.3083187	0.2313774	0.1741101	0.1313671	0.0993773	0.0753711	0.0573086	0.0436828	0.0333779
31	0.7345771	0.5412460	0.3999871	0.2964603	0.2203595	0.1642548	0.1227730	0.0920160	0.0691478	0.0520987	0.0393539	0.0298017
32	0.7273041	0.5306333	0.3883370	0.2850579	0.2098662	0.1549574	0.1147411	0.0852000	0.0634384	0.0473624	0.0354540	0.0266087
33	0.7201031	0.5202287	0.3770262	0.2740942	0.1998725	0.1461862	0.1072347	0.0788889	0.0582003	0.0430568	0.0319405	0.0237577
34	0.7129733	0.5100282	0.3660449	0.2635521	0.1903548	0.1379115	0.1002193	0.0730453	0.0533948	0.0391425	0.0287752	0.0212123
35	0.7059142	0.5000276	0.3553834	0.2534155	0.1812903	0.1301052	0.0936629	0.0676345	0.0489861	0.0355841	0.0259236	0.0189395
36	0.6989249	0.4902232	0.3450324	0.2436687	0.1726574	0.1227408	0.0875355	0.0626246	0.0449413	0.0323492	0.0233546	0.0169103
37	0.6920049	0.4806109	0.3349829	0.2342968	0.1644356	0.1157932	0.0818088	0.0579857	0.0412306	0.0294083	0.0210402	0.0150985
38	0.6851534	0.4711872	0.3252262	0.2252854	0.1566054	0.1092389	0.0764569	0.0536905	0.0378262	0.0267349	0.0189551	0.0134808
39	0.6783697	0.4619482	0.3157535	0.2166206	0.1491480	0.1030555	0.0714550	0.0497134	0.0347030	0.0243044	0.0170767	0.0120364
40	0.6716531	0.4528904	0.3065568	0.2082890	0.1420457	0.0972222	0.0667804	0.0460309	0.0318376	0.0220949	0.0153844	0.0107468

Table 4: PRESENT VALUE of Annuity of $1.00 in arrears.												
Period/Per	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	0.990099	0.980392	0.970874	0.961538	0.952381	0.943396	0.934579	0.925926	0.917431	0.909091	0.900901	0.892857
2	1.970395	1.941561	1.913470	1.886095	1.859410	1.833393	1.808018	1.783265	1.759111	1.735537	1.712523	1.690051
3	2.940985	2.883883	2.828611	2.775091	2.723248	2.673012	2.624316	2.577097	2.531295	2.486852	2.443715	2.401831
4	3.901966	3.807729	3.717098	3.629895	3.545951	3.465106	3.387211	3.312127	3.239720	3.169865	3.102446	3.037349
5	4.853431	4.713460	4.579707	4.451822	4.329477	4.212364	4.100197	3.992710	3.889651	3.790787	3.695897	3.604776
6	5.795476	5.601431	5.417191	5.242137	5.075692	4.917324	4.766540	4.622880	4.485919	4.355261	4.230538	4.111407
7	6.728195	6.471991	6.230283	6.002055	5.786373	5.582381	5.389289	5.206370	5.032953	4.868419	4.712196	4.563757
8	7.651678	7.325481	7.019692	6.732745	6.463213	6.209794	5.971299	5.746639	5.534819	5.334926	5.146123	4.967640
9	8.566018	8.162237	7.786109	7.435332	7.107822	6.801692	6.515232	6.246888	5.995247	5.759024	5.537048	5.328250
10	9.471305	8.982585	8.530203	8.110896	7.721735	7.360087	7.023582	6.710081	6.417658	6.144567	5.889232	5.650223
11	10.367628	9.786848	9.252624	8.760477	8.306414	7.886875	7.498674	7.138964	6.805191	6.495061	6.206515	5.937699
12	11.255077	10.575341	9.954004	9.385074	8.863252	8.383844	7.942686	7.536078	7.160725	6.813692	6.492356	6.194374
13	12.133740	11.348374	10.634955	9.985648	9.393573	8.852683	8.357651	7.903776	7.486904	7.103356	6.749870	6.423548
14	13.003703	12.106249	11.296073	10.563123	9.898641	9.294984	8.745468	8.244237	7.786150	7.366687	6.981865	6.628168
15	13.865053	12.849264	11.937935	11.118387	10.379658	9.712249	9.107914	8.559479	8.060688	7.606080	7.190870	6.810864
16	14.717874	13.577709	12.561102	11.652296	10.837770	10.105895	9.446649	8.851369	8.312558	7.823709	7.379162	6.973986
17	15.562251	14.291872	13.166118	12.165669	11.274066	10.477260	9.763223	9.121638	8.543631	8.021553	7.548794	7.119630
18	16.398269	14.992031	13.753513	12.659297	11.689587	10.827603	10.059087	9.371887	8.755625	8.201412	7.701617	7.249670
19	17.226008	15.678462	14.323799	13.133939	12.085321	11.158116	10.335595	9.603599	8.950115	8.364920	7.839294	7.365777
20	18.045553	16.351433	14.877475	13.590326	12.462210	11.469921	10.594014	9.818147	9.128546	8.513564	7.963328	7.469444
21	18.856983	17.011209	15.415024	14.029160	12.821153	11.764077	10.835527	10.016803	9.292244	8.648694	8.075070	7.562003
22	19.660379	17.658048	15.936917	14.451115	13.163003	12.041582	11.061240	10.200744	9.442425	8.771540	8.175739	7.644646
23	20.455821	18.292204	16.443608	14.856842	13.488574	12.303379	11.272187	10.371059	9.580207	8.883218	8.266432	7.718434
24	21.243387	18.913926	16.935542	15.246963	13.798642	12.550358	11.469334	10.528758	9.706612	8.984744	8.348137	7.784316
25	22.023156	19.523456	17.413148	15.622080	14.093945	12.783356	11.653583	10.674776	9.822580	9.077040	8.421745	7.843139
26	22.795204	20.121036	17.876842	15.982769	14.375185	13.003166	11.825779	10.809978	9.928972	9.160945	8.488058	7.895660
27	23.559608	20.706898	18.327031	16.329586	14.643034	13.210534	11.986709	10.935165	10.026580	9.237223	8.547800	7.942554
28	24.316443	21.281272	18.764108	16.663063	14.898127	13.406164	12.137111	11.051078	10.116128	9.306567	8.601622	7.984423
29	25.065785	21.844385	19.188455	16.983715	15.141074	13.590721	12.277674	11.158406	10.198283	9.369606	8.650110	8.021806
30	25.807708	22.396456	19.600441	17.292033	15.372451	13.764831	12.409041	11.257783	10.273654	9.426914	8.693793	8.055184
31	26.542285	22.937702	20.000428	17.588494	15.592811	13.929086	12.531814	11.349799	10.342802	9.479013	8.733146	8.084986
32	27.269589	23.468335	20.388766	17.873551	15.802677	14.084043	12.646555	11.434999	10.406240	9.526376	8.768600	8.111594
33	27.989693	23.988564	20.765792	18.147646	16.002549	14.230230	12.753790	11.513888	10.464441	9.569432	8.800541	8.135352
34	28.702666	24.498592	21.131837	18.411198	16.192904	14.368141	12.854009	11.586934	10.517835	9.608575	8.829316	8.156564
35	29.408580	24.998619	21.487220	18.664613	16.374194	14.498246	12.947672	11.654568	10.566821	9.644159	8.855240	8.175504
36	30.107505	25.488842	21.832252	18.908282	16.546852	14.620987	13.035208	11.717193	10.611763	9.676508	8.878594	8.192414
37	30.799510	25.969453	22.167235	19.142579	16.711287	14.736780	13.117017	11.775179	10.652993	9.705917	8.899635	8.207513
38	31.484663	26.440641	22.492462	19.367864	16.867893	14.846019	13.193473	11.828869	10.690820	9.732651	8.918590	8.220993
39	32.163033	26.902589	22.808215	19.584485	17.017041	14.949075	13.264928	11.878582	10.725523	9.756956	8.935666	8.233030
40	32.834686	27.355479	23.114772	19.792774	17.159086	15.046297	13.331709	11.924613	10.757360	9.779051	8.951051	8.243777