

SOLUTION KEY

CONCORDIA UNIVERSITY
DEPARTMENT OF ACCOUNTANCY

FINANCIAL ACCOUNTING
COMM 217 ALL SECTIONS

FINAL EXAMINATION (REGULAR) WINTER 2016

Name: _____ ID: _____

Duration: 3 hours

Instructions (very important):

1. This examination paper consists of **XX** pages including this page. Please make sure your copy has all pages before commencing to write.
2. Make sure that your FULL name (last name first), Student ID and Section Letter are on the three documents: computer input sheet, answer booklet and examination paper.
3. You must answer the multiple choice questions by using the **computer input sheet**; darken the letter you choose **in pencil** on the computer input sheet. Write all your answers to the other questions in the **examination answer booklet**. You may answer the questions in any order you prefer. **Only the answers on the computer input sheet and in the examination booklet will be graded.**
4. Read the questions carefully and budget your time wisely.
5. **Show all calculations** on the examination booklet, and omit narratives for journal entries. Using abbreviated account names, headings, subheadings, totals and subtotals is not recommended, and it may be subject to mark deduction.
6. This is a closed book examination. However, a silent hand-held (not graphical or programmable) calculator and one standard language (not electronic) dictionary are permitted.
7. **Professors and Invigilators will not answer questions.**
8. Return the exam along with the computer input sheet and answer booklet(s) when you have finished.

Question	Topic	Total Marks
1	Multiple Choice	15
2	Long-Term Assets & Income Taxes	15
3	Long-Term Liabilities	19.5
4	Statement of Cash Flows	20
5	Shareholders' Equity	16.5
6	Financial Statement Analysis	14
	Total	100

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I. Multiple Choice Questions (1.5 each; 15 marks total):

- 1) Which of the following statements is true about the price earnings (P/E) ratio?
 - a) It is a ratio of importance to creditors.
 - b) A high P/E ratio indicates investors have little confidence in the future earnings potential of the company.
 - c) **The P/E ratio could be used to approximate the value investors would be willing to pay for the company's acquisition from existing owners.**
 - d) The P/E ratio increases as net earnings increase.

- 2) Which of the following statements is false?
 - a) A company can change the method used for depreciating assets if the change can be justified because it provides a better measure of the company's net earnings.
 - b) **A change in estimate requires the company to recalculate and restate all the prior years' estimates of depreciation and adjust the impact on the statement of financial position and statement of earnings.**
 - c) A change in estimate is frequently necessary because the estimates of useful lives or residual values may change over time because conditions change.
 - d) Either a change in estimate or a change in method can only be justified on the basis it provides a better measure of net earnings.

- 3) Company Ltd. uses the direct method for the operating section of the cash flow statement. Which of the following statements, if any, is true?
 - a) Gains on sales of fixed assets are added in the operating section.
 - b) Dividends paid to shareholders are deducted in the operating section.
 - c) Depreciation expense is deducted in the operating section.
 - d) **None of the above statements is true.**

- 4) Bison Corp. issues a 5 year 8%, \$60,000 note payable on March 1. The terms of the note include monthly blended principal and interest payments of \$1,217. The entry to record the second installment payment will show a:
 - a) **Debit to Notes Payable for \$822.**
 - b) Debit to Cash for \$1,217.
 - c) Debit to Interest Expense for \$400.
 - d) Debit to Notes payable for \$817.

Calculation: $\$1,217 - (\$59,183 \times .08/12)$

- 5) Company Ltd. uses the direct method for the operating section of the cash flow statement. During 2015 rent expense was \$40,000. During the same period prepaid rent decreased by \$6,000 and rent payable increased by \$2,000. Cash paid for rent in 2015 was:
 - a) **\$32,000**
 - b) \$36,000
 - c) \$44,000
 - d) \$48,000

Calculation: $\$40,000 - \$6,000 - \$2,000 = \$32,000$

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- 6) Company Ltd. uses the direct method for the operating section of the cash flow statement. During 2015 sales were \$100,000 (70% on credit). During the same period accounts receivable increased by \$2,000. Cash collections from customers in 2015 were:

- a) \$98,000
- b) \$100,000
- c) \$102,000
- d) \$32,000

Calculation: $\$100,000 - \$2,000 = \$98,000$ **OR:**
 $\$100,000 \times 30\% + \$100,000 * .70 - \$2,000 = \$98,000$

- 7) Angstrom Corporation purchased a truck at a cost of \$60,000. It has an estimated useful life of five years and estimated residual value of \$5,000. At the beginning of year three, Angstrom's managers concluded that the total useful life would be four years, rather than five. There was no change in the estimated residual value. What is the amount of depreciation that Angstrom should record for year 3 under the straight-line method?

- a) \$8,250
- b) \$11,000
- c) \$15,500
- d) \$16,500

Calculation: $(\$60,000 - \{[(\$60,000 - \$5,000) \div 5] \times 2\} - \$5,000) \div 2 = \$16,500$

- 8) Which of the following statements is false?

- a) Depreciation expense is added to net earnings in the operating activities section of the statement of cash flows because it has no cash effect on net earnings under the indirect method.
- b) Depreciation expense is included in the investing activities section of the cash flow statement.
- c) The only cash effect for depreciation is the tax savings provided by its deduction to derive taxable income.
- d) Depreciation is a non-cash expense that reduces net earnings but involves no outflow of cash.

- 9) Jake Company is involved in a lawsuit. The liability that could arise as a result of this lawsuit should be recorded in the books if the probability of Jake owing money as a result of the lawsuit is:

- a) Remote and the amount can be reasonably estimated.
- b) Probable and the amount cannot be reasonably estimated.
- c) Reasonably possible and the amount can be reasonably estimated.
- d) Probable and the amount can be reasonably estimated.

- 10) Freeman Inc. reported a net earnings of \$40,000 for 2015. The income tax return excluded a revenue item of \$3,000 (reported on the statement of earnings) because under the tax laws the \$3,000 would not be reported for tax purposes until 2016.

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Assuming a 30% income tax rate, this situation would cause a 2015 deferred income tax amount of

- a) \$3,000 (debit)
- b) \$3,000 (credit)
- c) \$900 (debit)
- d) **\$900 (credit)**

Calculation: $\$3,000 \times 30\% = \900

II. Long-term Assets & Income Taxes (15 marks):

PART A: Long-term Assets (11.5 marks):

Following its business plan to expand to North America, Younis Café decided to open its first branch in downtown Montreal. In 2015, Younis Café purchased a property to begin its operations. The following expenses were incurred:

- Purchase of land with an existing building: \$527,000
- Commission fees: 8,000
- Legal fees for closing the deal: 5,000
- Building renovations directly after purchase: 70,000
- Opening ceremony of the café: 5,000
- Café furniture costs: 100,000
- Delivery of furniture incurred by the supplier: 6,000

Other information:

- The market values for the land and building were \$500,000 and \$100,000 respectively on the date of purchase.
- Younis Café incurred interest expense of \$3,000 for the financing of the new café during its first year of operation
- Younis café's fiscal year ends on December 31. All the assets were ready for use as at December 31, 2015. Depreciation related to the building and furniture began on January 1, 2016.

Required:

- 1) Determine the amounts that should be recorded for the land and building as at December 31, 2015? **(4 marks)**
- 2) Estimate the depreciation expense for the building during 2016. The building estimated useful life is 40 years and the residual value is \$40,000. Younis café uses the straight-line method for the building. **(1.5 marks)**
- 3) Estimate the depreciation expense for the furniture during 2016 and 2017. The furniture is depreciated using the double-declining balance method. The furniture has an estimated useful life of 5 years and a residual value of \$5,000. **(2 marks)**
- 4) On January 1, 2018 Younis café decided to change its furniture depreciation method from the double declining to the straight-line method. Also, it expected the furniture

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would last for another four years and will have a residual value of \$6,000. What is the depreciation expense for 2018 and 2019? (2 marks)

- 5) Younis café sold the furniture on June 30, 2020 for \$11,250 in cash. Prepare the journal entries for this transaction. (2 marks)

Long-term Assets Solution:

PART A (11.5 marks)

1)

$$\begin{aligned}\text{Total cost} &= \text{purchase price} + \text{commission fees} + \text{legal fees} + \text{building renovation} \\ &= 527,000 + 8,000 + 5,000 \\ &= \$540,000\end{aligned}$$

$$\text{Building} = (100,000 / 600,000) \times 540,000 = \$90,000 + \$70,000 = \$160,000$$

$$\text{Land} = (500,000 / 600,000) \times 540,000 = \$450,000$$

2)

$$\text{Building depreciation} = (160,000 - 40,000) / 40 = \$3,000$$

3)

Furniture depreciation:

$$2016: 100,000 \times 2/5 \text{ (OR } \times 40\%) = \$40,000$$

$$2017: (100,000 - 40,000) \times 2/5 = \$24,000$$

4)

$$\text{Carrying amount: } 100,000 - 40,000 - 24,000 = \$36,000$$

$$2018: (36,000 - 6,000) / 4 = \$7,500$$

$$2019: \$7,500$$

$$2020: \$7,500 / 2 = \$3,750 \text{ (half year)}$$

5)

$$\text{Accumulated depreciation} = 40,000 + 24,000 + 7,500 + 7,500 + 3,750 = \$82,750$$

Dr. Accumulated depreciation	82,750
Dr. Cash	11,250
Dr. Loss on disposal	6,000
Cr. Furniture	100,000

PART B (This part is independent of PART A):

Income Tax (3.5 marks):

Company P had pretax earnings of \$30,000 in 2014. Included in the \$30,000 is a revenue transaction of \$2,000 that is recognized in 2014 as per IFRS and in 2015 as per the tax code. The corporate income tax rate for Company P is 25% and its pretax earnings for

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2015 was \$34,000. Record the journal entries relating to income tax for both 2014 and 2015.

PART B (3.5 marks)

Income Tax Solution:

2014:

Income tax Expense*	7,500
Deferred income tax liability ⁺	500
Income tax payable ⁺⁺⁺	7,000

* = $(\$30,000 \times 25\%)$

+ = $(\$2,000 \times 25\%)$

+++ = $[(\$30,000 - 2,000) \times 25\%]$

2015:

Income tax Expense $(\$34,000 \times 25\%)$	8,500
Deferred income tax liability $(\$2,000 \times 25\%)$	500
Income tax payable $[(\$34,000 + 2,000) \times 25\%]$	9,000

III. Long-term Liabilities (19.5 Marks)

Micros Corporation issued \$600,000 face value debentures on April 1, 2016. The bonds mature on March 31, 2026. The annual stated (coupon) rate is 5%, and interest must be paid annually on March 31. The annual market rate was 7% at the time of issuance. Micros Corporation's fiscal year ends on December 31. Micros Corporation uses the effective interest method, in accordance with IFRS requirements.

Required (Round all numbers to the nearest dollar)

1. Calculate the cash proceeds from the bond issuance on April 1, 2016 and prepare the journal entry (Present Value tables are on page **xx** of the examination paper). **(4 marks)**
2. Prepare the journal entries to record the transaction on December 31, 2016 and on March 31, 2017. **(6.5 marks)**
3. Assume that Micros Corporation redeems 60% of the bonds for cash at 105% immediately after paying the interest on March 31, 2017.
 - a. Prepare the journal entry for this transaction. **(4.5 marks)**
 - b. Prepare the sections of the financial statements that are affected by this change on March 31, 2017 (after the redemption); i.e. Statement of Financial Position, Statement of Earnings, and Statement of Cash Flows. (Provide all necessary

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details in the presentation; the proper section name and the corresponding accounts.) (4.5 marks)

Bonds Solution:

Req. 1

Annual interest payments = $\$600,000 \times 5\% = \$30,000$

$PV_{\text{face}} = \$600,000 \times 0.5083 = \$304,980$

$PV_{\text{annuity}} = \$30,000 \times 7.0236 = \$210,708$

$PV_{\text{bond}} = \$304,980 + \$210,708 = \$515,688$

Discount on bond = $\$600,000 - \$515,688 = \$84,312$

Discount on Bond Payable.....	84,312	
Cash	515,688	
		Bond Payable..... 600,000

Req. 2

December 31, 2016

Interest Expense.....	27,074	
		Interest Payable..... 22,500
		Discount on bond payable..... 4,574

Calculation Marks:

Interest Expense for 1 year = $\$515,688 \times 7\% = \$36,098$

Interest Expense for the period = $(\$515,688 \times 7\%) \times 9/12 = \$27,074$

Interest Payable = $\$30,000 \times 9/12 = \$22,500$

Discount on bond payable for the period = $\$27,074 - \$22,500 = \$4,574$ or = $\$6,098 \times 9/12 = \$4,574$

$\$6,098 = \$36,098 - \$30,000 = \text{Annual discount amortized} = \text{Interest expense} - \text{interest payable}$

March 31, 2017

Interest Expense.....	9,025		
Interest Payable.....	22,500		
		Discount on bond payable..... 1,525	
		Cash	30,000

Calculation Marks:

*Interest Expense for the period = $\$36,098.16 \times 3/12 = \$9,024.54$ (rounded = 9,025) **OR** $36,098.16 - 27,073.62$*

*Discount on bond payable for the period = $\$6,098.16 \times 3/12 = \$1,524.54$ (rounded = 1,525) **OR** $30,000 - (22,500 + 9,024.54)$*

Req. 3

Cash = $60\% \times 1.05 \times \$600,000 = \$378,000$

Bond Payable = $60\% \times 600,000 = \$360,000$

Unamortized discount = $\$84,312 - \$6,098 = \$78,214$

Discount on bond payable = $60\% \times (\$84,312 - \$6,098) = \$46,928$

Loss on redemption = $\$378,000 + \$46,928 - \$360,000 = \$64,928$

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Dr. Bond Payable.....	360,000	
Dr. Loss on redemption of bond.....	64,928	
Cr. Discount on bond payable.....		46,928
Cr. Cash		378,000

Micros Corporation Statement of Financial Position At March 31, 2017

Non-current liabilities

Bond Payable.....	240,000
Discount on Bond Payables.....	(31,285.54)
Bond, carrying amount.....	208,714

*Calculations:

$$\text{Bond Payable} = \$600,000 * 40\% = \$240,000$$

$$\text{Discount on bond payable} = 40\% * \$78,214 = \$31,286$$

Micros Corporation Statement of Earnings For Period Ended March 31, 2017

Other Gains/Losses (Or Non-Operating Items)

Loss on redemption.....	64,928
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Micros Corporation Statement of Cash Flows For Period Ended March 31, 2017

Cash from financing activities

Redemption of bonds payable.....	(378,000)
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IV. Statement of Cash Flows (20 marks; 36 minutes)

XYZ Ltd. has provided you with all necessary selected financial statements to prepare a statement of cash flows. The information they provided to you is for the fiscal years 2016 and 2015, respectively. The fiscal year-end date is April 30. Selected Statement of Financial Position information for 2016 and 2015 follows:

	2016	2015
Cash	\$37,000	\$10,000
Trade accounts receivable	57,200	33,000
Merchandise inventory	42,000	85,000
Investment in shares (long-term)	5,000	20,000
Land	78,000	38,000
Equipment, at cost	82,000	92,000
Less: Accumulated depreciation	(31,000)	(15,000)
TOTAL ASSETS	\$270,200	\$263,000
Trade accounts payable	\$40,000	\$72,800
Accrued operating expenses payable	15,200	23,200
Income taxes payable	17,000	10,000
Bonds payable	65,000	40,000
Common shares	96,000	65,000
Retained earnings	37,000	52,000
TOTAL LIABILITIES & EQUITIES	\$270,200	\$263,000

Selected Statement of Earnings information for the fiscal year ended April 30, 2016 follows:

Gross profit	\$120,000
Operating expenses (includes depreciation expense of \$17,000)	48,000
Interest expense	5,000
Gain on disposal of equipment	3,000
Income tax expense	19,000
Net earnings	\$ 51,000

Additional information for fiscal 2016:

1. New equipment was purchased by using the cash proceeds from issuing shares.
2. Slightly used equipment was sold for cash because it was no longer needed.
3. Certain long-term investments were sold for cash at their book value.
4. New bonds were issued for cash at their face value
5. Additional land was purchased for cash. There were no disposals of land.
6. A large cash dividend was declared and paid.

Required

- a. Prepare in proper form a **COMPLETE** Statement of Cash Flows for fiscal year 2016. Use the indirect method for the operating section of the statement. **(17 marks)**
- b. How much was *Free Cash Flow* for fiscal 2016? What does the amount mean? **(3 marks)**

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a)

XYZ Ltd.
Cash Flow Statement
For the Fiscal Year ended April 30, 2016

Operating activities	
Net income	\$ 51,000
Add (deduct) items not affecting cash:	
Depreciation expense	17,000
Gain on disposal of equipment	(3,000)
Increase in trade receivables	(24,200)
Decrease in merchandise inventory	43,000
Decrease in trade payables	(32,800)
Decrease in accrued payables	(8,000)
Increase in income taxes payable	<u>7,000</u>
Cash from (used in) operating activities	<u>\$50,000</u>
Investing activities	
Acquisition of equipment	(31,000)
Disposal of equipment (Calc. 1)	43,000
Sale of long-term investments	15,000
Acquisition of land	<u>(40,000)</u>
Cash from (used in) investing activities	<u>(13,000)</u>
Financing activities	
Issuance of bonds payable	25,000
Issuance of common shares	31,000
Payment of dividends (Calc. 2)	<u>(66,000)</u>
Cash from (used in) financing activities	<u>(10,000)</u>
Increase (decrease) in cash	27,000
Cash balance, April 30, 2015	<u>10,000</u>
Cash balance, April 30, 2016	<u>\$37,000</u>

Supplementary disclosure (required):

Interest paid, \$5,000.

Income taxes paid, \$12,000. [$\$10,000 + \$19,000 - \$17,000$]

Calc. 1: $\$92,000 + \$31,000 - \$82,000 = \$41,000$ cost of equipment sold.

$\$15,000 + \$17,000 - \$31,000 = \$1,000$ accum. depreciation of equipment sold.

$\$41,000 - \$1,000 + \$3,000 = \$43,000$ **proceeds** from disposal of equipment.

Calc. 2: $\$52,000 + \$51,000 - \$37,000 = \$66,000$.

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Req. 2

Free cash flow = \$50,000 - \$28,000 * - \$66,000 = (\$44,000)

* (\$31,000) + \$43,000 - \$40,000

- Free cash flow represents the cash available for emergency needs or to take immediate advantage of important investment opportunities.
- In this case the free cash flow is actually negative.
- The main reason for this result is the very large cash dividend that was paid.

V. Shareholders' Equity (16.5 marks; 40 minutes)

ABC Corp., which follows IFRS, reported the following amounts in the shareholders' equity section of its December 31, 2014 statement of financial position:

Preferred shares, \$8 dividend (10,000 shares authorized, 2,000 shares issued)	\$200,000
Common shares (100,000 authorized, 25,000 issued)	100,000
Contributed surplus	155,000
Retained earnings	<u>250,000</u>
Total	<u><u>\$705,000</u></u>

During 2015, the company had the following transactions that affect shareholders' equity:

1. Paid the annual dividend on preferred shares and a \$3 per share dividend on common shares. These dividends had been declared on December 31, 2014.
2. Repurchased 3,700 common shares for \$35 per share and cancelled them.
3. Issued 1,000 preferred shares at \$105 per share (at the beginning of the year).
4. Declared a 10% stock dividend on the outstanding common shares when the shares were selling for \$45 per share.
5. Issued the stock dividend.
6. Declared the annual dividend on preferred shares and a \$2 per share dividend on common shares on December 31, 2015. These dividends are payable in 2016.

Additional Information:

- The contributed surplus arose from the excess of proceeds over cost on a previous cancellation of common shares.
- Total assets at December 31, 2014, were \$1,940,000, and total assets at December 31, 2015, were \$1,916,000.
- Net income for 2015 was \$450,000.

Required:

- a) Prepare journal entries to record the transactions above. (9 marks)
- b) Prepare the December 31, 2015 shareholders' equity section. (5.5 marks)
- c) Calculate the earnings per share and the return on equity for 2015. Evaluate the results from the perspective of a common shareholder. (2 marks)

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(a)

(a)	1.	Dividends Payable (Preferred - 2,000 X \$8)	16,000	
		Dividends Payable (Common - 25,000 X \$3)	75,000	
		Cash		91,000
	2.	Common Shares	14,800	
		Contributed Surplus	114,700	
		Cash (3,700 X \$35)		129,500
		[\$100,000 / 25,000 X 3,700 = \$14,800]		
	3.	Cash (1,000 X \$105)	105,000	
		Preferred Shares		105,000
	4.	Retained Earnings	95,850	
		Common Stock Dividends		
		Stock dividend to be issued		95,850
		[(25,000 – 3,700) X 10% = 2,130 X \$45]		
	5.	Common Stock Dividends		
		Stock dividend to be issued	95,850	
		Common Shares		95,850
	6.	Retained Earnings	70,860	
		Dividends Payable		24,000
		(Preferred - 3,000 X \$8)		
		Dividends Payable		46,860
		[(Common - 25,000 – 3,700 + 2,130) X \$2]		

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(b) ABC Corp.
Statement of Financial Position (Partial)
At December 31, 2015

Shareholders' Equity	
Share capital	
Preferred shares	\$305,000
Common shares	<u>181,050</u>
Total share capital	486,050
Contributed surplus	<u>40,300</u>
Total contributed capital	526,350
Retained earnings	<u>533,290</u>
Total shareholders' equity	<u><u>\$1,059,640</u></u>

Calculations:

$$\text{Preferred shares: } \$200,000 + \$105,000 = \underline{\$305,000}$$

$$\text{Common shares: } \$100,000 - \$14,800 + \$95,850 = \underline{\$181,050}$$

$$\text{Contributed surplus: } \$155,000 - \$114,700 = \underline{\$40,300}$$

$$\text{Retained earnings: } \$250,000 - \$95,850 - \$70,860 + \$450,000 = \underline{\$533,290}$$

(c) (2 Marks)

$$\begin{aligned} \text{Return on Equity:} &= \text{Net earnings} / \text{Av Shareholders' Equity} \\ &= [450,000 / ((705,000 + 1,059,640)/2)] = 0.51 = 51\% \end{aligned}$$

Earnings per share for 2015:

$$\frac{\text{Net earnings} - \text{preferred dividends}}{\text{Average number of common shares outstanding}}$$

$$\frac{(\$450,000 - \$24,000)}{((25,000 + 23,430)/2)} = \$17.59$$

Management seems effective in utilizing shareholders' equity: for every dollar invested by shareholders, management is able to create 51 cents in earnings.

EPS ratio shows a return of \$17.59 per common share outstanding: this seems like an excellent return per share, of course depending on how this compares to ABC's competitors.

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VI. Financial Statement Analysis (14 marks):

Balding Inc. has come to the bank you work for looking for a \$250,000 long-term loan. The loan committee has asked you to review the following data submitted with Balding's loan application:

	2009	2010	2011
Current assets	\$316,500	\$475,200	\$820,800
Current liabilities	120,000	155,400	414,600
Long-term liabilities	60,800	175,200	300,000
Shareholders' equity	303,700	408,600	490,200
Earnings from operations	168,900	103,500	208,500
Interest expense	7,200	13,200	28,500
Income tax expense	64,680	36,120	72,000
Net earnings	97,020	54,180	108,000
Cash flow from operations	106,300	64,200	115,000

Tax rate = 40% for all three years.

Required:

- a. Calculate the following ratios: Return on Assets, Debt to Equity, times-interest-earned, and quality of earnings for all three years. **Show your calculations. (7.5 marks)**
- b. Write a brief report giving your recommendation on granting the loan. Provide support for your position by explaining the ratio results you calculated in part (a) above. **(6.5 marks)**

Solution: (14 marks in total)

- a. For showing the calculation correctly

	2009	2010	2011
Return on Assets	32.04%	14.17%	17.78%
Calculations: Net income + interest Exp (net of tax) / Av. Total Assets			
2009: $[97,020 + (7,200 \times 0.6)] / (120,000 + 60,800 + 303,700)$			
= 0.3204 = 32.04%			
2010: $[56,100 + (13,200 \times 0.6)] / \{[(120,000 + 60,800 + 303,700) + (155,400 + 175,200 + 408,600)]/2\}$ = 0.1417 = 14.17%			
2011: $[108,000 + (28,500 \times 0.6)] / \{[(155,400 + 175,200 + 408,600) + (414,600 + 300,000 + 490,200)]/2\}$ = 0.1778 = 17.78%			

Debt/Equity	59.5%	80.9%	145.8%
Calculations: (Current Liabilities + Long-term) / Shareholders' Equity			
2009: $(120,000 + 60,800) / 303,700 = 0.5953 = 59.53\%$			
2010: $(155,400 + 175,200) / 408,600 = 0.8091 = 80.91\%$			
2011: $(414,600 + 300,000) / 490,200 = 1.4578 = 145.78\%$			

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Times interest earned	23.46	7.84	7.32
Calculations: $\text{Net Income} + \text{Interest Exp.} + \text{Income Tax Exp.} / \text{interest exp}$			
2009: $(97,020 + 7,200 + 64,680) / 7,200 = 23.46$			
2010: $(54,180 + 13,200 + 36,120) / 13,200 = 7.84$			
2011: $(108,000 + 28,500 + 72,000) / 28,500 = 7.32$			

Quality of earnings	1.10	1.18	1.06
Calculations: $\text{Cash flows from Operating Activities} / \text{Net Income}$			
2009: $106,300 / 97,020 = 1.10$			
2010: $64,200 / 54,180 = 1.18$			
2011: $115,000 / 108,000 = 1.06$			

b.

The return on Assets ratio indicates how much income was generated from each dollar invested in assets, i.e. how efficient management is in using assets.

- This has decreased significantly from 33.37% in 2009 to 17.44% in 2010 and the slightly increasing to 27.84% in 2011.
- While this decrease is partly due to the significant increase in assets over the three years, the decrease from 2009 to 2010 is magnified by the decrease in net income from 2009 to 2010 (and increase in interest expense).

The debt/equity ratio

- Has increased significantly over the three-year period.
- Both long-term and short-term debt have experienced substantial growth.
- Specifically, the debt/equity shows that creditors have lent \$1.46 for every \$1.00 of shareholders' equity.
- The higher this ratio, the greater the risk to the lender because shareholders' equity acts as a cushion when operating losses occur.
- This increase in debt could have been used to expand operations (acquisitions?) as assets have increased by around \$500,000 from 2009 to 2011.

The times-interest-earned ratio

- Has dropped dramatically,
 - Indicating the decreasing likelihood that long-term lenders will receive their interest payments when due if this ratio continues to decrease.
- Yet interest expense is still covered by net income by around 7 times in 2010 and 2011.

SOLUTION KEY

The Quality of Earnings:

- Is consistently above 1, this means that every dollar of net income is supported by \$1 of cash flows from operating activities.
- This means that accruals are not abused by the company to boost their net income, indicating high quality earnings.

Overall:

While Balding Inc. does seem to have good quality earnings, and its return on assets seems to have recovered from a drop in 2010, its times interest earned ratio is continuously decreasing and its debt to equity ratio is extremely high (debt is not fully covered by the company's equity)

The bank should not advance a loan at this time due to the substantial risks involved (the high level of debt held compared to equity)

OR

The bank should give the loan since Balding seems to be expanding its business and it has a good ROA, high quality earnings and its interest expense is covered 7 times by net income

SOLUTION KEY

Present Value Tables

TABLE A.1

Present Value of \$1, $p = 1/(1 + i)^n$

Periods	2%	2.5%	2.75%	3%	3.75%	4%	4.25%	5%	5.5%
1	0.9804	0.9756	0.9732	0.9709	0.9639	0.9615	0.9592	0.9524	0.9479
2	0.9612	0.9518	0.9472	0.9426	0.9290	0.9246	0.9201	0.9070	0.8985
3	0.9423	0.9286	0.9218	0.9151	0.8954	0.8890	0.8826	0.8638	0.8516
4	0.9238	0.9060	0.8972	0.8885	0.8631	0.8548	0.8466	0.8227	0.8072
5	0.9057	0.8839	0.8732	0.8626	0.8319	0.8219	0.8121	0.7835	0.7651
6	0.8880	0.8623	0.8498	0.8375	0.8018	0.7903	0.7790	0.7462	0.7252
7	0.8706	0.8413	0.8270	0.8131	0.7728	0.7599	0.7473	0.7107	0.6874
8	0.8535	0.8207	0.8049	0.7894	0.7449	0.7307	0.7168	0.6768	0.6516
9	0.8368	0.8007	0.7834	0.7664	0.7180	0.7026	0.6876	0.6446	0.6176
10	0.8203	0.7812	0.7624	0.7441	0.6920	0.6756	0.6595	0.6139	0.5854
20	0.6730	0.6103	0.5813	0.5534	0.4789	0.4564	0.4350	0.3769	0.3427
Periods	6%	7%	8%	9%	10%	11%	12%	13%	14%
1	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8850	0.8772
2	0.8900	0.8734	0.8573	0.8417	0.8264	0.8116	0.7972	0.7831	0.7695
3	0.8396	0.8163	0.7938	0.7722	0.7513	0.7312	0.7118	0.6931	0.6750
4	0.7921	0.7629	0.7350	0.7084	0.6830	0.6587	0.6355	0.6133	0.5921
5	0.7473	0.7130	0.6806	0.6499	0.6209	0.5935	0.5674	0.5428	0.5194
6	0.7050	0.6663	0.6302	0.5963	0.5645	0.5346	0.5066	0.4803	0.4556
7	0.6651	0.6227	0.5835	0.5470	0.5132	0.4817	0.4523	0.4251	0.3996
8	0.6274	0.5820	0.5403	0.5019	0.4665	0.4339	0.4039	0.3762	0.3506
9	0.5919	0.5439	0.5002	0.4604	0.4241	0.3909	0.3606	0.3329	0.3075
10	0.5584	0.5083	0.4632	0.4224	0.3855	0.3522	0.3220	0.2946	0.2697
20	0.3118	0.2584	0.2145	0.1784	0.1486	0.1240	0.1037	0.0868	0.0728

TABLE A.2

Present Value of Annuity of \$1, $P = [1 - 1/(1 + i)^n]/i$

Periods	2%	2.5%	2.75%	3%	3.75%	4%	4.25%	5%	5.5%
1	0.9804	0.9756	0.9732	0.9709	0.9639	0.9615	0.9592	0.9524	0.9479
2	1.9416	1.9274	1.9204	1.9135	1.8929	1.8861	1.8794	1.8594	1.8463
3	2.8839	2.8560	2.8423	2.8286	2.7883	2.7751	2.7620	2.7232	2.6979
4	3.8077	3.7620	3.7394	3.7171	3.6514	3.6299	3.6086	3.5460	3.5052
5	4.7135	4.6458	4.6126	4.5797	4.4833	4.4518	4.4207	4.3295	4.2703
6	5.6014	5.5081	5.4624	5.4172	5.2851	5.2421	5.1997	5.0757	4.9955
7	6.4720	6.3494	6.2894	6.2303	6.0579	6.0021	5.9470	5.7864	5.6830
8	7.3255	7.1701	7.0943	7.0197	6.8028	6.7327	6.6638	6.4632	6.3346
9	8.1622	7.9709	7.8777	7.7861	7.5208	7.4353	7.3513	7.1078	6.9522
10	8.9826	8.7521	8.6401	8.5302	8.2128	8.1109	8.0109	7.7217	7.5376
20	16.3514	15.5892	15.2273	14.8775	13.8962	13.5903	13.2944	12.4622	11.9504
Periods	6%	7%	8%	9%	10%	11%	12%	13%	14%
1	0.9434	0.9346	0.9259	0.9174	0.9091	0.9009	0.8929	0.8550	0.8772
2	1.8334	1.8080	1.7833	1.7591	1.7355	1.7125	1.6901	1.6681	1.6467
3	2.6730	2.6243	2.5771	2.5313	2.4869	2.4437	2.4018	2.3612	2.3216
4	3.4651	3.3872	3.3121	3.2397	3.1699	3.1024	3.0373	2.9745	2.9137
5	4.2124	4.1002	3.9927	3.8897	3.7908	3.6959	3.6048	3.5172	3.4331
6	4.9173	4.7665	4.6229	4.4859	4.3553	4.2305	4.1114	3.9975	3.8887
7	5.5824	5.3893	5.2064	5.0330	4.8684	4.7122	4.5638	4.4226	4.2883
8	6.2098	5.9713	5.7466	5.5348	5.3349	5.1461	4.9676	4.7988	4.6389
9	6.8017	6.5152	6.2469	5.9952	5.7590	5.5370	5.3282	4.1317	4.9464
10	7.3601	7.0236	6.7101	6.4177	6.1446	5.8892	5.6502	5.4262	5.2161
20	11.4699	10.5940	9.8181	9.1285	8.5136	7.9633	7.4694	7.0248	6.6231