

FINAL EXAMINATION (REGULAR)

Winter 2017

Name: _____

ID: _____

Section:

Duration: 3 hours

Instructions (very important):

1. This examination paper is **20 pages including this page**. Make sure you have all pages.
2. Write 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. **Multiple choice questions**: must be answered on the **computer input sheet** by darkening the letter you choose **in pencil**.
4. **All other questions**: must be answered 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.

5. Read the questions carefully and budget your time wisely.
6. **Show all calculations** on the examination booklet, and omit narratives for journal entries.
7. Using abbreviated account names, headings, subheadings, totals and subtotals is not recommended, and it may be subject to mark deduction.
7. 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.
8. **Invigilators will not answer questions.**
9. Return the exam along with the computer input sheet and answer booklet(s) when you have finished.

GOOD LUCK!

Question	Topic	Total Marks
1	Multiple Choice Questions	30
2	Statement of Cash Flows	21
3	Long-Term Assets	14
4	Financial Statements Analysis	17
5	Long-Term Liabilities	18
	Total	100

Question 1: Multiple Choice Questions: (1.5 marks each; total of 30 marks)

1. Preferred shares issued in exchange for land would be reported in
 - a. The financing activities section in the statement of cash flows.
 - b. The investing activities section in the statement of cash flows.
 - c. **Supplemental disclosure to the statement of cash flows.**
 - d. The operating activities section in the statement of cash flows.

2. For an investment to qualify as a cash equivalent, it must be readily convertible to a known amount of cash and which of the following?
 - a. It must be identified as a cash equivalent on the statement of earnings.
 - b. It must mature within four months.
 - c. The investment must have a predetermined foreign exchange rate.
 - d. **Must be sufficiently close to its maturity date so that its market value is relatively insensitive to interest rate changes.**

3. When using the indirect method in the statement of cash flows, a gain on sale of equipment is reported as:
 - a. An increase to cash provided by investing activities.
 - b. **A decrease to net earnings.**
 - c. An increase to revenues.
 - d. A decrease to equipment purchases.

4. Which of the following is NOT true of the direct method of preparing a statement of cash flows?
 - a. It gives the user a sense of the magnitude of gross cash flowing in and out of the company.
 - b. It has the same cash flows from investing and financing activities as the indirect method.
 - c. **It has a different net cash flow from operating activities than the indirect method.**
 - d. It reports the same net increase or decrease in cash as the indirect method.

5. Which of the following statements about the quality of earnings ratio is true?
 - a. When sales are growing, liabilities normally increase faster than shareholders' equity so the ratio increases.
 - b. Seasonal variations in sales have no impact on the quality of earnings ratio.
 - c. **Failure to accrue appropriate expenses will inflate net earnings and reduce the quality of earnings ratio.**
 - d. Failure to accrue appropriate expenses will inflate net earnings and increase the quality of earnings ratio.

6. Typical financing activities do NOT include the following:
 - a. Proceeds from issuance of short- and long-term borrowings.
 - b. Principal payments on short- and long-term borrowings.
 - c. **Purchase of short- or long-term investments for cash.**
 - d. Purchase of shares for retirement.

7. Which of the following most likely would be classified as a current liability?
 - a. **Dividends payable**
 - b. Bonds payable
 - c. Three-year notes payable
 - d. Mortgage payable

8. The federal government requires which of the following?
 - a. Only the employer to pay CPP contributions.
 - b. Only the employee to pay CPP contributions.
 - c. Neither the employer nor the employee to pay CPP contributions.
 - d. **Both the employer and the employee to pay CPP contributions.**

9. An example of a provision includes:
 - a. Estimate of future sales
 - b. **Legal and tax disputes that arise in the ordinary course of business**
 - c. Depreciation of plant and equipment
 - d. Interest payable

10. YYC Inc. sold 2,000 smart TVs for \$650 each during 2017. YYC Inc. provides a one year warranty on smart TVs. If YYC estimates that warranty costs would be \$70 per each smart TV, YYC would record a journal entry that includes a debit to:
 - a. Cash, for \$140,000
 - b. **Warranty expense, for \$140,000**
 - c. Sales returns, for \$140,000
 - d. Estimated warranty liability, for \$140,000

11. YWF Corp. has a legal case in court. Its ex-employees are suing it in court for damages to loss of their jobs. The lawyer of YWF informed the accounting department that there is a probable outflow of resources in that case, but the amount cannot be estimated reliably. What should the accounting department do in this case:
 - a. Ignore the case since the amount cannot be estimated.
 - b. **Do not recognize a provision, but disclose the information in the notes to the financial statements.**
 - c. Record a provision since this is serious case.
 - d. Recognize a provision without disclosing additional information in the notes to the financial statements.

12. YEG Inc.'s payroll for April 2017 is as follows:

Salaries and wages earned	\$1,000,000
Employees' income tax, withheld	35,000
CPP contributions, from employees	55,000
EI contributions, from employees	30,000

What is YEG Inc.'s total liabilities as of April 30, 2017?

- a. \$125,000
- b. \$90,000
- c. \$235,000
- d. **\$217,000**

Calculation: Employees' contribution + Employers' contribution = (35,000 + 55,000 + 30,000) + (55,000 + (30,000 x 1.4)) = \$217,000

13. YXE Computers offers warranties on its laptops. The provision for product warranties at year-end amounted to \$2,021 in 2016, and \$1,826 in 2015. YXE paid \$557 in 2016 to repair products under warranty. What was the amount of warranty expense in 2016?

- a. \$ 195
- b. \$ 1,269
- c. **\$ 752**
- d. \$ 557

Calculation: \$1,826 - 557 + X = \$2,021; X = 2,021 - 1,826 + 557 = \$752

14. YYZ Corporation had net earnings of \$500,000 for 2016. It declared \$125,000 in dividends to the preferred shareholders during the year. YYZ had a weighted average of 1,500,000 common shares and 250,000 preferred shares outstanding during the year.

YYZ Corporation's earnings per share for 2016 was:

- a. **\$0.25**
- b. \$0.33
- c. \$0.29
- d. \$0.21

Calculation: (500,000 - 125,000) / 1,500,000 = 0.25

15. A stock split results in a decrease in

- a. Current liabilities.
- b. Net earnings.
- c. Share capital.
- d. **Market price per share.**

16. Which of the following ratios is not a test of solvency?
- Debt to equity ratio.
 - Times interest earned ratio.
 - Cash coverage ratio.
 - Earnings per share ratio.**
17. Assume the following shares are outstanding for YVR Corporation:
- Preferred shares, \$3, cumulative, 1,000 shares.
 - Common shares, 2,000 shares.
- Total dividends declared in 2016 were \$30,000. No dividends were declared in 2015, 2014 and 2013. What is the total amount of dividends to which common shareholders are entitled?
- \$18,000**
 - \$21,000
 - \$27,000
 - \$30,000
- Calculation: $\$3 \times 1,000 \text{ shares} = 3,000 \times 4 \text{ years} = 12,000$; $30,000 - 12,000 = \$18,000$*
18. Which of the following is true with regard to a stock dividend?
- It results in a transfer of retained earnings to contributed capital.**
 - It increases the number of shares outstanding and involves a pro rata reduction in the contributed capital account.
 - It is accounted for in exactly the same manner as a stock split.
 - It does not require a journal entry.
19. Which of the following is an important measure of the average movement of goods "on and off the shelf" of a company?
- Profit margin.
 - Price/earnings ratio.
 - Gross inventory ratio.
 - Inventory turnover ratio.**
20. A store that sells fresh fish would most likely have
- A high inventory turnover.**
 - A low current ratio.
 - A high quick ratio.
 - A low inventory turnover.

Question 2: Statement of Cash Flows (21 marks):

The comparative statements of financial position for YUL Inc. as at December 31, 2015 and 2016, and its statement of earnings for the year ended December 31, 2016, are presented below.

YUL INC.		
Statement of Financial Position		
As at December 31,		
Assets	2016	2015
Current Assets		
Cash	\$ 168,608	\$ 74,000
Trades receivable (net)	51,520	46,000
Rent receivable	4,000	-
Prepaid insurance	6,700	12,000
Inventory	111,250	100,000
Total Current Assets	342,078	232,000
Non-Current Assets		
Buildings and equipment (net)	646,000	334,000
Land	695,000	150,000
Total Non-Current Assets	1,341,000	484,000
Total Assets	\$1,683,078	\$716,000
Liabilities and Shareholders' Equity		
Liabilities		
Current Liabilities		
Salaries payable	\$ 9,600	-
Deferred revenue	9,900	-
Income tax payable	50,000	-
Dividends payable	25,000	-
Total Current Liabilities	94,500	-
Non-Current Liabilities		
Bonds payable	500,000	-
Total liabilities	594,500	-
Shareholders' Equity		
Common shares	730,000	\$ 564,000
Retained earnings	358,578	152,000
Total Shareholders' Equity	1,088,578	716,000
Total Liabilities and Shareholders' Equity	\$1,683,078	\$716,000

YUL INC.
Statement of Earnings
For the year ended December 31, 2016

Revenues	
Sales (net)	\$805,400
Cost of sales	201,750
Gross Profit	603,650
Operating Expenses	
Utilities expense	56,000
Salaries expense	99,600
Depreciation expense	38,000
Insurance expense	5,300
Shipping expense	1,500
Bad debt expense	6,480
Total Operating Expenses	206,880
Earnings From operations	396,770
Non-Operating Activities and Gains	
Rent revenue	48,000
Interest expense	(36,000)
Gain on sale of equipment	10,000
Total Non-Operating Activities and Gains	22,000
Earnings Before Income Tax Expense	418,770
Income tax expense (25%)	104,692
Net Earnings	\$314,078
Earnings Per Share	\$15.70

Additional Information:

- 1) Equipment with a carrying value of \$30,000 was sold for cash.
- 2) Every fixed asset (or capital asset) transaction was on cash basis.

Required (Show your work and calculations):

- a) Using the indirect method, prepare the operating section of statement of cash flows for YUL Inc. for the year ended December 31, 2016. **(6.5 marks)**
- b) How much cash did the company pay for the buildings and equipment it acquired in 2016? How much did it pay for the land it acquired in 2016? **(3 marks)**
- c) How much cash did the company receive for selling equipment during 2016? **(1 mark)**
- d) How much cash did the company pay for dividends in 2016? **(2 marks)**

- e) How much cash did the company pay for income taxes during 2016? **(1 mark)**
- f) How much did the company receive from its customers during 2016? **(1.5 marks)**
- g) Compute and interpret the cash coverage ratio and the times interest earned ratio. Limit your interpretation to one statement per ratio. **(5 marks)**
- h) In one statement and based on your computations for both ratios in (g) above, what can you say about YUL's capabilities regarding interest expense obligations? **(1 mark)**

Solution: (21 marks)

a) **6.5 Marks**

YUL INC.

Statement of Cash flows

For the year ended December 31, 2016

Cash flows from Operating Activities

Net Income	\$314,078
Add (deduct) non-cash items:	
Depreciation Expense:	38,000
Less gain on sale of Equipment	-10,000
Increase in Trade receivables	-5,520
Increase in rent receivables	-4,000
Decrease in Prepaid Insurance	5,300
Increase in Inventory	-11,250
Increase in Salaries Payable	9,600
Increase in Deferred revenue	9,900
Increase in income tax payable	50,000
Net Cash flows from Operating Activities	\$396,108

b) **(3 marks) Cash Paid for Equipment acquisition:**

Equipment Beginning Balance - Depreciation Expense - Carrying Value of Disposed Equipment + Acquisition = Ending Balance

So: Acquisition = Ending Balance - Beginning Balance + Depreciation Expense + Carrying Value of Disposed equipment:

Acquisition of Equipment = 646,000 - 334,000 + 38,000 + 30,000 = 380,000

Acquisition of land = ending land balance – beginning land balance
= 695,000 – 150,000 = \$545,000

c) **(1 mark) Cash for Sale of equipment:**

Cash for selling equipment = carrying value + gain on sale of equipment
= 30,000 + 10,000 = 40,000

d) (2 marks) Cash paid for dividends:

$$\begin{aligned}\text{Dividends} &= \text{Beginning Retained earnings} + \text{net earnings} - \text{ending retained earnings} \\ &= 152,000 + 314,078 - 358,578 = 107,500\end{aligned}$$

$$\begin{aligned}\text{Cash paid for dividends} &= \text{Dividends} - \text{dividends payable} \\ &= 107,500 - 25,000 = \$82,500.\end{aligned}$$

e) (1 mark) Cash paid for income tax expense:

$$\begin{aligned}\text{Cash paid for tax} &= \text{income tax expense} - \text{taxes payable} \\ &= \$104,692 - 50,000 = \$54,692\end{aligned}$$

f) (1.5 marks) Cash received from customers:

$$\begin{aligned}\text{Cash received from customers} &= \text{Sales revenue} - \text{increase in trade receivables} \\ &= 805,400 + (9,900^{**} - (51,520 - 46,000 + 6,480^{*})) \\ &= 805,400 + 9,900 - 12,000 = \$803,300\end{aligned}$$

* 6,480 = bad debt expense; necessary to factor in calculation because the trade receivable are "net" of AFDA, and bad debt expense is the increase in AFDA.

** 9,900 = increase in deferred revenue

g) (5 marks)

$$\text{Cash Coverage Ratio} = \frac{(\text{Cash flows from operations} + \text{Interest paid in cash} + \text{tax paid in cash})}{\text{Interest paid in cash}}$$

$$= \frac{(396,108 + 36,000 + 54,692)}{36,000} = \frac{486,800}{36,000} = 13.5$$

YUL's cash flows from operating activities are 13.5 times the interest it pays in cash.

$$\text{Times interest earned ratio} = \frac{(\text{Net earnings} + \text{Interest expense} + \text{tax expense})}{\text{Interest expense}}$$

$$= \frac{(314,078 + 104,692 + 36,000)}{36,000} = \frac{454,770}{36,000} = 12.63$$

YUL is generating net earnings that are 12.63 times the interest expense it incurred.

h) (1 mark)

YUL can meet its interest expense obligations through the earnings and cash it generates from operating activities.

It has a strong stream of net earnings and cash from operating activities that allow it to meet its interest expense obligations.

Question 3: Long-Term Assets: (14 marks)

YMG is establishing a new manufacturing facility in Laval city to manufacture soft drinks. For this purpose, it purchased several long-term assets on December 31, 2016. The following expenditures were incurred to set up the new facility:

- Purchase of land with an existing building: \$2,500,000
- Building expenses to adjust several floors' settings to fit YMG's purposes: \$150,000
- Realty fees: \$50,000
- Title fees: \$35,000
- Commission fees: \$40,000
- Government sales tax on the transaction: \$20,000
- Purchase of furniture: \$300,000
- Delivery of furniture paid by YMG: \$10,000
- Purchase of equipment: \$500,000
- Delivery of equipment paid by supplier: \$20,000
- Additional fees to prepare the building for usage: \$5,000
- Financing cost to finance the purchase: \$60,000

Additional information:

- The market value of the land and building was \$2,000,000 and \$1,000,000 respectively on date of purchase.
- The fiscal year of YMG ends on December 31. Depreciation of the building, furniture, and equipment started on January 1, 2017.

Required: Show your calculations & Round to the nearest cent or second decimal

- 1) Calculate the allocated cost for the land and building purchased on December 31, 2016. **(4.5 marks)**
- 2) The building has an estimated useful life of 50 years with a residual value of \$45,000. The building will be depreciated using the straight-line method. Calculate the depreciation expense for the building for 2017. **(1.5 marks)**
- 3) The equipment is estimated to produce 1,500,000 cases of soft drinks during its life time. The equipment will be depreciated using the units-of-production method. The equipment has an estimated residual value of \$25,000. During 2017, the equipment produced

250,000 cases of soft drinks. Calculate the depreciation expense of equipment for 2017. (2 marks)

- 4) On January 1, 2018 YMG revised its depreciation method and decided to switch from the units-of-production method to the double-declining balance method. The company estimated the equipment to have a remaining useful life of 6 years. Calculate the depreciation expense for 2018. (1 mark)
- 5) On June 30, 2019 YMG sold the equipment for \$300,000. Prepare the journal entries on that date. (4.5 marks)
- 6) What is the annual depreciation rate for the land? (0.5 mark)

Solution long-term assets: (14 marks)

Required 1: Cost Allocation of purchase: (4.5 Marks)

Acquisition cost: Purchase price + Realty fees + Title fees + Commission fees + Sales taxes
= \$2,500,000 + \$50,000 + \$35,000 + \$40,000 + \$20,000
= \$2,645,000

Land = $(2,000,000/3,000,000) \times 2,645,000 = \$1,763,333$

Building = $(1,000,000/3,000,000) \times 2,645,000 = \$881,667 + 150,000 + 5,000 = \$1,036,667$

Required 2: Depreciation of building: (1.5 mark)

Depreciation expense = $\frac{(1,036,667 - 45,000)}{50} = \$19,833.34$

Required 3: Depreciation of equipment: Units of production: (2 marks)

Depreciation expense = $\frac{(500,000 - 25,000)}{1,500,000} = 0.31667$; rounded = $(0.32 \times 250,000) = \$80,000$

***If students don't round = $0.31667 \times 250,000 = \$79,166.67$*

Required 4: Revised Depreciation method of Equipment to double declining: (1 mark)

Depreciation expense = Carrying value x double declining rate:
= $(500,000 - 80,000) \times \frac{2}{6 \text{ years}} = \$140,000$

***If students rounded the double declining rate: = $(500,000 - 80,000) \times 0.33 = \$138,600$*

Required 5: Sale of Equipment for \$300,000: Record all journal entries (4.5 marks)

Updated Depreciation expense for 6 months (from January 1 2019 until June 30, 2019):
= $(500,000 - 80,000 - 140,000) \times \frac{2}{6 \text{ years}} \times \frac{6 \text{ months}}{12 \text{ months}} = \$46,666.67$

Dr. Depreciation expense \$46,666.67
 Cr. Accumulated Depreciation \$46,666.67

Recording the sale:

Dr. Cash \$300,000
Dr. Accumulated Depreciation \$266,666.67*
 Cr. Gain on disposal or sale \$66,666.67
 Cr. Equipment \$500,000

* *Accumulated depreciation = 80,000 + 140,000 + 46,666.67 = \$266,666.67*

Required 6: Annual depreciation rate of land (0.5 mark)

Land is not depreciated, so there would not be a depreciation rate for land.

Question 4: Financial Statement Analysis: (17 marks)

Presented below are the statement of financial position and the statement of earnings for Metro Company Inc., a company that sells food and everyday products and services.

metro

Consolidated statements of financial position

As at September 29, 2012, September 24, 2011 and September 26, 2010

(Millions of dollars)

	2012	2011	2010
ASSETS			
Current assets			
Cash and cash equivalents	73.3	255.5	214.7
Accounts receivable (notes 13 and 28)	332.8	300.3	311.3
Inventories (note 10)	784.4	728.3	699.3
Prepaid expenses	6.6	11.7	9.7
Current taxes	13.9	2.2	1.7
Assets held for sale (note 11)	0.6	6.6	—
Total Current Assets	1,211.6	1,304.6	1,236.7
Non-current assets			
Investment in an associate (note 12)	324.5	258.7	220.9
Other financial assets (note 13)	21.6	17.0	15.8
Fixed assets (note 14)	1,280.3	1,226.1	1,217.2
Investment properties (note 15)	22.1	27.0	27.8
Intangible assets (note 16)	373.1	297.2	304.0
Goodwill (note 17)	1,859.5	1,649.1	1,603.7
Deferred taxes (note 8)	56.3	45.8	48.8
Defined benefit assets (note 25)	1.4	1.6	20.3
Total Assets	5,150.4	4,827.1	4,695.2
LIABILITIES AND EQUITY			
Current liabilities			
Bank loans (note 18)	0.3	0.3	1.0
Accounts payable	1,086.4	1,061.1	1,064.1
Current taxes	60.5	46.2	50.8
Provisions (note 19)	11.2	17.3	9.2
Current portion of debt (note 20)	12.1	378.1	4.7
Total Current Liabilities	1,170.5	1,503.0	1,129.8
Non-current liabilities			
Debt (note 20)	973.9	656.2	1,004.3
Defined benefit liabilities (note 25)	156.9	132.2	97.0
Provisions (note 19)	3.1	4.0	4.8
Deferred taxes (note 8)	147.7	119.0	124.5
Other liabilities (note 21)	13.9	13.4	15.9
Non-controlling interest (note 30)	139.3	—	—
Total Liabilities	2,605.3	2,427.8	2,376.3
Equity			
Capital stock (note 22)	664.6	682.6	702.1
Contributed surplus	4.6	3.8	8.2
Retained earnings	1,976.1	1,763.6	1,608.4
Accumulated other comprehensive income (note 23)	(101.0)	(51.2)	(0.3)
Equity attributable to equity holders of the parent	2,544.3	2,398.8	2,318.4
Non-controlling interests	0.8	0.5	0.5
Total Equity	2,545.1	2,399.3	2,318.9
Total Liabilities and Equity	5,150.4	4,827.1	4,695.2



Consolidated statements of income
Years ended September 29, 2012 and September 24, 2011
(Millions of dollars, except for net earnings per share)

	2012 <i>(53 weeks)</i>	2011 <i>(52 weeks)</i>
Sales <i>(note 28)</i>	12,010.8	11,396.4
Cost of sales and operating expenses <i>(note 7)</i>	(11,189.1)	(10,652.0)
Share of an associate's earnings <i>(notes 7 and 12)</i>	72.6	42.4
Closure expenses <i>(note 7)</i>	—	(20.5)
Earnings before financial costs, taxes, depreciation and amortization	894.3	766.3
Depreciation and amortization <i>(note 7)</i>	(183.9)	(179.3)
Operating income	710.4	587.0
Financial costs, net <i>(note 7)</i>	(46.4)	(41.5)
Earnings before income taxes	664.0	545.5
Income taxes <i>(note 8)</i>	(174.7)	(152.8)
Net earnings	489.3	392.7
Net earnings per share <i>(Dollars)</i> <i>(note 9)</i>		
Basic	4.87	3.81

Additional Information:

- 1) Dividends per share were \$0.8375 in 2012, \$0.7475 in 2011 and \$0.6475 in 2010.
- 2) The market price per share at year end was \$58.40 for 2012, \$44.69 for 2011 and \$45.15 for 2010.

Required (Show your work):

- a) For **each** of the following ratios: **(15 marks)**
 - Current Ratio
 - Return on Assets
 - Return on Equity
 - Price/Earnings Ratio
 - i. Calculate the ratios for 2012 and 2011, round your answers to the nearest cent (or second decimal).
 - ii. Write a statement interpreting the result for 2012
 - iii. Explain what caused the ratio for 2012 to be different from the ratio for 2011 (Hint: you need to examine both financial statements above to properly interpret the difference).
- b) Examine non-current assets and non-current liabilities. Which item from non-current assets had the largest change from 2011 to 2012? Which item from non-current liabilities had the largest change from 2011 to 2012? What could have caused that change in these two items? **(2 marks)**

Solution: (17 marks)

a) **(i) & (ii) (iii) (15 marks)**

Current Ratio = Current Assets / Current Liabilities

$$2012 = \frac{\$1,211.6}{\$1,170.5} = 1.035 = 1.04$$

$$2011 = \frac{\$1,304.6}{\$1,503} = 0.867 = 0.87$$

(ii) 2012: Metro's current assets are 1.04 times their current liabilities

(iii) Current ratio increased from 2011 to 2012 due to a decrease in current liabilities, specifically the current portion of debt was much higher in 2011.

Return on Assets = Net Earnings + (Interest expense x (1-tax rate)) / Average Assets

$$2012 = \frac{(\$489.3 + (\$46.4 \times (1 - 0.26^*)))}{((\$5150.4 + \$4827.1) / 2)} = 0.104 = 0.10$$

$$* \text{ Tax rate} = \text{income tax} / \text{earnings before income tax} = \$174.7 / \$664 = 0.26$$

$$2011 = \frac{(\$392.7 + (\$41.5 \times (1 - 0.28^{**})))}{((\$4827.1 + \$4695.2) / 2)} = 0.088 = 0.09$$

$$** \text{ Tax rate} = \text{income tax} / \text{earnings before income tax} = \$152.8 / \$545.5 = 0.28$$

NOTE: if students do not re-calculate the tax rate for 2011 but do everything else correct in the ratio, do not deduct marks for 2011 ROA, but do not grant them a mark for the **tax rate calculation of 2011

(ii) 2012: Metro is generating \$0.10 in net earnings for every \$1 investment by creditors and shareholders.

(iii) ROA increased from 2011 to 2012 due to an increase in net earnings that was greater in proportion than the increase in total assets.

Return on Equity = Net Earnings / Average Equity

$$2012 = \frac{\$489.3}{((\$2,545.1 + \$2,399.3) / 2)} = 0.1979 = 0.20$$

$$2011 = \frac{\$392.7}{(\$2,399.3 + \$2318.9) / 2} = 0.1664 = 0.17$$

- (ii) 2012: Metro is generating \$0.2 in net earnings from every \$1 investment by shareholders
- (iii) ROE increased from 2011 to 2012 due to an increase in net earnings that was greater in proportion than the increase in total shareholders' equity.

Price/Earnings Ratio = Current market price per share / Earnings per share

$$2012 = \frac{\$58.4}{\$4.87} = 11.991 = 11.99$$

$$2011 = \frac{\$44.69}{\$3.81} = 11.729 = 11.73$$

- (ii) 2012: Metro's market price per share is 11.99 times its EPS, suggesting that the stock market is predicting a good future for Metro (growth and increased profit)
- (iii) Price/Earnings increased from 2011 to 2012 due to an increase in Metro's share price, that was greater in proportion than the increase in EPS;
- this was caused by: (any one of the following would be acceptable)
 - An acquisition
 - Increase in net earnings and sales
 - Increased total assets

b) (2 marks)

Non-current Assets: Goodwill changed by \$210.4, from \$1,649.1 in 2011 to \$1,859.5 in 2012

Non-current Liabilities: Debt changed by \$317.7, from \$656.2 in 2011 to \$973.9 in 2012

The most likely reason for this change is because Metro acquired another business through the issuance of debt.

Question 5: Long-Term Liabilities: (18 marks)

YKF Corp decided to move into a new line of business that requires funding. For this reason, it decided to issue bonds on August 1, 2017 with a face value of \$800,000. The bonds will mature on July 31, 2027. The annual coupon rate is 8% and interest is paid on annual basis on July 31. At the date of issuance the annual market rate was 6%; later in February 2018 it decreased to 5% and remained at that level.

The fiscal year of YKF starts on January 1 and ends on December 31. YKF uses the effective interest method to amortize bond discounts and premiums.

Required: Show your calculations and

- a) Calculate the issuance price of the bonds on August 1, 2017 and prepare the journal entry related to this transaction. Present value tables are found at the end of the examination sheet. **(3 marks)**
- b) Prepare the journal entries on December 31, 2017 and July 31, 2018. **(5 marks)**
- c) Assume on July 31, 2018 YKF decided to redeem 40% of the bonds for cash at 108% immediately after the payment of interest.
 - i. Prepare the journal entries related to this transaction. **(3.5 marks)**
 - ii. Show the related sections of the three financial statements affected by the early retirement of the bonds on July 31, 2018. **(5.5 marks)**
- d) If YKF did not redeem the bonds in (c) above, what would be the total interest expense incurred over 10 years (i.e. the total interest expense recorded over the life of the bond, from issuance until maturity)? **(1 mark)**

Solution: (18 marks)

5(a) (3 marks)

August 1, 2017:

PV of principle: $\$800,000 \times 0.5584 = \$446,720$

PV of annuity: $\$64,000 \times 7.3601 = \underline{\$471,046.40}$

Issuance price: $\$917,766.40$

Dr. Cash	917,766.40		
	Cr. Bonds payable	\$800,000	
	Cr. Premium on bonds payable	\$117,766.40	

5(b) (5 marks)

December 31, 2017:

Dr. Interest expense	\$22,944.16*		
Dr. Premium on Bond Payable	\$3,722.51		
	Cr. Interest payable	\$26,666.67**	

**Interest expense = $\$917,766.40 \times 6\% \times 5/12 = 55,065.984 \times 5/12 = \$22,944.16$*

*** Interest Payable = $\$800,000 \times 8\% \times 5/12 = 64,000 \times 5/12 = \$26,666.67$*

July 31, 2018:

Dr. Interest expense	\$32,121.82*		
Dr. Interest payable	\$26,666.67		
Dr. Premium on bonds payable	\$5,211.51		
	Cr. Cash	\$64,000	

**Interest expense = $917,766.40 \times 6\% \times 7/12 = \$32,121.82$*

5(c) (i) (3.5 marks)

Cash paid for redemption = $108\% \times \$800,000 \times 40\% = \$345,600$

Carrying amount = $(\$917,766.40 - \$3,722.51 - \$5,211.51) \times 40\% = \$363,532.95$

Gain = Carrying amount - Cash paid for redemption = $\$17,932.95$

Bonds redeemed = $\$800,000 \times 40\% = \$320,000$

Dr. Bond payable	\$320,000		
Dr. Premium on bonds payable	\$43,532.95		
	Cr. Gain on bond redemption	\$17,932.95	
	Cr. Cash	\$345,600	

5(c) (ii) (5.5 marks)

Statement of Financial Position:

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Non-current liabilities:

Bonds payable	\$480,000
Premium on bonds payable	<u>\$65,299.43</u>
Bonds payable, net	\$545,299.43

Statement of Earnings:

Non-operating activities and Gains/Losses:

Gain on redemption	\$17,932.95
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Cash flow statement:

Cash flow from financing activities:

Redemption of bonds payable	(\$345,600)
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5(d): (1 mark)

Total interest expense = interest paid throughout bond life – total premium amortization
= $(64,000 \times 10) - 117,766.40 = \$522,233.60$

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