

SUGGESTED SOLUTION, FINAL EXAMINATION (REGULAR)
FALL 2013

QUESTION 1 (18 marks; 1.5 marks each)

1.D

2.B The COGS should be increased by $\$6,000 + \$8,000$, resulting in a reduction of profit before income taxes by $\$14,000$, and a reduction of income tax expense by $\$5,600$. Hence, income tax expense for 2012 is overstated.

3.D Answer A is only correct if the repurchase price is lower than the average issuance price.

4.D $\$35,000 - (20,000 \times \$0.30) \times 3$ years.

5.A $(\$100,000 + \$100,000 \times 8\% \times 10 \text{ years}) - \$106,000$.

6.C

7.D

8.D

9.B

10.B

11.D The increase in current assets is proportionally lower than the increase in current liabilities, but the increase in quick assets is proportionally higher than the increase in current liabilities.

12.C $\$400,000 + \$30,000 + \$7,500$.

QUESTION 2 (15 marks)**Req. 1 (10 marks)**

a. COGS on June 20: $\$8 \times 10,000 + \$6 \times 25,000 = \$230,000$

COGS on November 20: $\$6 \times 5,000 + \$5.5 \times 7,000 = \$68,500$

Gross profit = Net sales – Cost of goods sold

$$= (\$13 \times 35,000 + \$10 \times 12,000) - (\$230,000 + \$68,500)$$

$$= \$575,000 - \$298,500 = \$276,500$$

b. COGS on June 20: $\$6.5$ (note 1) $\times 35,000 = \$227,500$

Note 1: Weighted average cost =

$$(\$8 \times 10,000 + \$6 \times 30,000) / (10,000 + 30,000) = \$6.5$$

COGS on November 20: $\$5.75$ (note 2) $\times 12,000 = \$69,000$

Note 2: Weighted average cost =

$$(\$6.5 \times 5,000 + \$5.5 \times 15,000) / (5,000 + 15,000) = \$5.75$$

Gross profit = $\$575,000 - (\$227,500 + \$69,000) = \$278,500$

Req. 2 (3 marks)

a. FIFO assumes the old goods at any date are sold before the new goods are sold. Thus, the same amount of inventory cost flows to COGS, no matter whether COGS is computed throughout the accounting period (perpetual) or computed once at the end of accounting period (periodic) . Therefore, the company would report the same gross profit using FIFO under both inventory systems .

b. Under the periodic inventory system, the weighted average cost includes the cost of all units available for sale during the accounting period ; in contrast, under the perpetual inventory system, the weighted average cost takes into account only the cost of units available for sale up to the date of sale . Using the weighted average method, the company would report higher gross profit under the periodic inventory system, because the unit cost has been decreasing during the year .

Req. 3 (2 marks)

The loss related to the write-down of inventory would reduce income tax expense and profit on the income statement . On the statement of financial position, the carrying amount of inventories would decrease with corresponding decreases in both income tax payable (due the decrease in income tax expense) and retained earnings (because of the decrease in profit) . There will be no effect on the statement of cash flows .

QUESTION 3 (14 marks)

Req. 1 (4 marks)

Cost of the building = $\$160,000^1 + 40,000^2 = \$200,000$.

Depreciation expense of the building in 2011 = $(\$200,000 - 50,000) / 10 = \$15,000$.

Carrying amount of the building, December 31, 2011 = $\$200,000 - 15,000^3 = \$185,000$.

Notes:

1. Cost of the building before renovation =
 $\$200,000 / (150,000 + 200,000 + 50,000) \times 320,000 = \$160,000$
2. Renovation cost
3. Since the building became available for use in 2011, the accumulated depreciation of the building at year end equals the amount of depreciation expense in 2011.

Req. 2 (3 marks)

Cost of the equipment = $\$50,000 / (150,000 + 200,000 + 50,000) \times 320,000 = \$40,000$

Depreciation expense, 2011 = $\$40,000 \times (2/5) = \$16,000$

Depreciation expense, 2012 = $(\$40,000 - \$16,000) \times (2/5) = \$9,600$

Req. 3 (5 marks)

Walton realized a loss of \$1,240 from selling the equipment.

Depreciation rate = $(\$40,000^1 - 25,600^2 - 4,000^3) / 200,000 = \0.052

Depreciation expense in 2013 = $\$0.052 \times 80,000 = \$4,160$

Gain (loss) = $\$9,000^4 - (\$40,000^1 - 25,600^2 - 4,160) = -\$1,240 \rightarrow \text{Loss}$

Notes:

1. Cost of equipment (see requirement 2).
2. Accumulated depreciation at the end of 2012, which equals the depreciation expense for both 2011 and 2012 (see requirement 2).
3. Residual value of equipment.
4. Cash proceeds from selling the equipment.

Req. 4 (2 marks)

The change would have no impact on Walton's operating cash flows, because cash proceeds from selling the equipment are classified as investing activities.

When a company reports its operating cash flows using the indirect method, the company adjusts its profit for any gains or losses related to equipment disposal. When a company calculates its operating cash flows using the direct method, gains or losses related to equipment disposal are irrelevant.

QUESTION 4 (20 marks)

Part A, Req. 1 (5 marks)

a. Interest paid = $\$5,000 \times 2 = \$10,000$

Note: \$5,000 is paid on January 1, 2012, and \$5,000 is paid on July 1, 2012.

b. Interest Expense = $\$4,269^1 + 4,240^2 = \$8,509$.

Notes:

1. Interest expense recognized on July 1, 2012:

$$\$106,737 \times (8\% \times \frac{1}{2}) = \$4,269$$

2. Interest expense accrued on December 31, 2012:

$$(\$106,737 - (5,000 - 4,269)^*) \times (8\% \times \frac{1}{2}) = 4,240$$

*\$5,000 – 4,269 is the amount of premium amortized for the first six months of 2012.

Interest paid is based on the stated interest rate that Blackcherry promised to pay per year to the bondholder ; and interest expense reflects the cost of interest to the company. Interest expense for 2013 is lower than interest paid because the bondholder wanted to earn only 8% on the bond investment while the company offered 10%.

Req. 2 (4 marks)

Blackcherry would recognize a gain of \$649 from this early redemption.

Notes:

Bonds redeemed = $\$100,000 \times 20\% = \$20,000$

Reduction of unamortized premium after redemption:

Balance of unamortized premium on bonds as at January 1, 2013

Unamortized premium at January 1, 2012	\$6,737	[\$106,737 – \$100,000]
Amortization for the first 6 months of 2012	(731)	[\$5,000 – \$4,269]
Amortization for the second 6 months of 2012	<u>(760)</u>	[\$5,000 – \$4,240]
Unamortized premium at December 31, 2012	\$5,246	
Percentage of bonds redeemed	<u>x 20%</u>	
	\$1,049	

$$\begin{aligned} \text{Loss (Gain)} &= \text{Cash paid} - \text{Carrying amount of bonds redeemed} \\ &= (\$20,000 \times 102\%) - (\$20,000 + 1,049) = -\$649 \rightarrow \text{Gain} \end{aligned}$$

Part B (8 marks)

TigerCom
Statement of Financial Position (Partial)
As at December 31, 2012

Current liabilities

Interest Payable	\$ 2,250 (Note 1)
Note Payable (5%, due on October 1, 2013)	<u>60,000 (Note 2)</u>
	62,250

Non-Current liabilities

Bond Payable (8%, due on December 31, 2022)	800,000
Plus: Premium on Bond Payable	<u>27,800</u>
Carrying Amount	827,800 (Note 3)

Note 1: $\$60,000 \times 5\% \times 9/12 = 2,250$

Note 2: Note Payable is reported under *Current Liabilities* because it is due within one year. It is considered as *Current Portion of Long-Term Debt*.

Note 3:

PV of principal = $\$800,000 \times \text{PV } \$1 (3.75\%, 20) = \$800,000 \times 0.4789 = \$383,120$

PV of annuity = $(\$800,000 \times 4\%) \times \text{PVA } \$1 (3.75\%, 20) = \$32,000 \times 13.8962 = \$444,678$

Total proceeds from bond issuance = $\$383,120 + 444,678 = \$827,798$

Premium = $\$827,798 - 800,000 = \$27,798$

Part C (3 marks)

1. This account reflects an *estimated* liability for (1) sales that may be returned by customers after sale and (2) future return of merchandise sold under warranty. In the first scenario, the account Sales Returns is increased, which reduces net revenues and Shareholders' equity, and the Provisions account is increased, thus increasing Liabilities. In the second scenario, the account Warranty expense is increased, which reduces Shareholders' equity, and the Provisions account is increased, thus increasing Liabilities. Therefore, if the amount of A increases by \$10,000, Liabilities would increase and Shareholders' equity would decrease by the same amount .
2. The estimated liability would decrease when customers return merchandise to Canadian Tire. A typical return of merchandise would be recorded as follows: Debit: Provision for sales and warranty returns, Credit: various accounts such as Cash or Trade receivables for returned merchandise, and Inventories and Wages payable for repairing defective merchandise. Therefore, if the amount of B increases by \$10,000, there would not be any impact on the income statement .

QUESTION 5 (10 marks)

Req. 1 (3 marks)

a. Total proceeds = $(\$14,000 - 8,000)^1 + (\$8,000 - 0)^2 + (\$24,000 - 22,000)^3 = \$16,000$

Note:

1. Increase in bank loan.
2. Increase in bond payable.
3. Increase in share capital.

b. Gain (Loss) on sale of equipment = Cash received – Carrying amount of equipment sold
 $- 1,200^1 = X - (\$5,000^2 - 3,200^3) \rightarrow X = \600

Note:

1. Loss on sale of equipment.
2. Book value of the old equipment.
3. Accumulated depreciation of the old equipment.

Req. 2 (7 marks)

NOLA INC.

Statement of Cash Flows (Partial) For the year ended December 31, 2012

Operating activities

Profit	\$12,000
Add (deduct) items not affecting operating cash flows	
Loss on sale of equipment	1,200
Gain on sale of investment	(800)
Depreciation expense	15,200
Increase in Trade receivables	(3,200)
Decrease in Inventories	1,500
Increase in Trade payables	400
Increase in Interest payable	3,000
Increase in Income tax payable	<u>500</u>
<i>Net cash from operating activities</i>	<u>29,800</u>

Investing activities

Sale of equipment	600
Purchase of equipment (see note below)	(47,000)
Sale of investment	<u>1,800</u> <u>(1,000 + 800)</u>
<i>Net cash from (used for) investment activities</i>	<u>(44,600)</u>

Note:

Purchase of equipment = $\$68,000^1 - (26,000^2 - 5,000^3) = \$47,000$

1. Ending balance of equipment for fiscal year 2012.
2. Beginning balance of equipment for fiscal year 2012.
3. Original cost of the old equipment.

QUESTION 6 (23 marks)

Part A, Req. 1 (5 marks)

a. Receivable turnover = Net credit sales / Average net trade receivables

$$= (682,163 \times 90\%) / [(28,937 + 30,245) / 2] = 20.75$$

b. Debt to equity = Total liabilities / Total shareholders' equity

$$= 133,405 / 452,187 = 0.30$$

c. Fixed assets turnover = Net sales / Average net fixed assets

$$= 682,163 / [(214,158 + 218,146) / 2] = 3.16$$

d. Price / Earnings = Market price per share / Earnings per share

$$= 13 / 0.67 = 19.40 \text{ (if students use diluted EPS, the answer would be } 13 / 0.65 = 20)$$

Req. 2 (2 marks)

The debt-to-equity ratio measures a company's solvency (the company's ability to meet its long obligation, and it is particularly useful when evaluating Leon's loan application. The receivables turnover ratio measures a company's liquidity (the company's ability to meet its current liabilities, including interest payments), and it is also useful when evaluating Leon's loan application.

Req. 3 (3 marks)

The times interest earned ratio and the cash coverage ratio would also be relevant, since they provide additional information regarding a company's solvency. The student will likely indicate that interest expense is not reported in the income statement. They will likely not realize that the company reported Finance income, and that it does not have long-term debt that incurs interest. With regard to the cash coverage ratio, the student will likely indicate that interest paid, income taxes paid and cash flows from operations are not available, and that they are reported on the statement of cash flows.

Part B, Req. 1 (1.5 marks)

Beginning balance of Trade receivables (\$28,937)
+ Net sales (\$682,163, the percentage of credit sales is irrelevant)
– Cash received from customers
= Ending balance of Trade receivables (\$30,245)
→ Cash received from customers = \$680,855

Req. 2 (3 marks)

Beginning balance of Inventories (\$87,830)
+ Purchases
– Cost of sales (\$398,704)
= Ending balance of Inventories (\$86,057)
→ Purchases = \$396,931

Beginning balance of Trade payables (\$62,485)
+ Purchases (\$396,931)
– Cash paid to suppliers
= Ending balance of Trade payables (\$52,681)
→ Cash paid to suppliers = \$406,735

Req. 3 (1.5 marks)

Annual depreciation of buildings = $(\$184,590 - 0) / 30 = \$6,153$.
Age = $\$129,213 / \$6,153 = 21$ years.

Alternatively, the age of the buildings can be determined as follows:
Age = $(\$129,213 / \$184,590) \times 30 = 21$ years.

Req. 4 (3 marks)

- For intangible assets with definite life, such as patent, the carrying value would decrease due to amortization. For intangible assets with indefinite life, such as copyright, the carrying value would decrease due to impairment.
- Goodwill increases when the purchase price of a business exceeds the fair value of its identifiable assets and liabilities.

Req. 5 (2.5 marks)

Beginning balance of Retained earnings (404,647)
+ Profit (46,782)
– Dividends declared
= Ending balance of Retained earnings (423,099)
→ Dividends declared = 28,330

Therefore, the increase in Leon's retained earnings, \$18,452, between 2011 and 2012 can be explained by profit of \$46,782 minus dividends declared \$28,330.

Req. 6 (1.5 marks)

Beginning balance of Dividends payable (17,457)
+ Dividends declared (28,330)
– Cash dividends paid
= Ending balance of Dividends payable (7,055)
→ Cash dividends paid = 38,732