

SUGGESTED SOLUTION, FINAL EXAMINATION (REGULAR)
FALL 2014

QUESTION 1 (21 marks; 1.5 marks each)

- 1) D
- 2) A
- 3) C
- 4) C
- 5) D
- 6) A
- 7) B
- 8) C
- 9) C
- 10) C
- 11) B
- 12) C
- 13) C
- 14) D

Calculation: $\$20,000 + 10,000 + 7,000 - 8,000 - 6,500$

Dividend to preferred shareholders: $(\$0.30 \times 20,000) \times 3 \text{ years} = \$18,000$

QUESTION 2 (19 marks)

Req. 1

Sam would report depreciation expense for the building and equipment, and interest expense related to the note payable.

Acquisition cost: $\$5,500,000 + (180,000 + 220,000 + 100,000) = \$6,000,000$

Market Value: $\$1,750,000 + 2,800,000 + 2,450,000 = \$7,000,000$

Allocation of acquisition cost:

Land: $\$6,000,000 \times (1,750,000/7,000,000) = \$1,500,000$

Buildings: $\$6,000,000 \times (2,800,000/7,000,000) = \$2,400,000$

Equipment: $\$6,000,000 \times (2,450,000/7,000,000) = \$2,100,000$

Depreciation expense – building = $(\$2,400,000 - 150,000) / 10 = \underline{\$225,000}$

Depreciation expense – equipment = $(\$2,100,000 \times (2/4)) = \underline{\$1,050,000}$

Interest expense on note payable = $\$2,750,000 \times 5\% = \$137,500$

Req. 2

Sam Co,
Statement of Cash Flows (partial)
For the year ended June 30, 2012

Operating activities

Net earnings	\$ xxx,xxx	
Adjustments for items not affecting Cash :		
Depreciation expense	1,275,000	[\$1,050,000 + 225,000]
Increase in interest payable	137,500	[\$2,750,000 x 5%]

Investing activities

Purchase of property and equipment	(3,250,000)	(\$2,750,000 + 500,000)
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Note: The company signed a note for \$2,750,000 as partial payment for property and equipment.

Req. 3

Depreciation expense	93,750	
Accumulated depreciation – building		93,750
Cash	2,500,000	
Accumulated depreciation – building	768,750	
Building		2,800,000
Gain on sale of building		468,750

Notes:

1. Revised depreciation expense:

Acquisition cost	\$2,400,000
Less: Accumulated depreciation (\$225,000 x 3 years).....	675,000
Undepreciated balance	1,725,000
Add: Construction cost	400,000
Total	2,125,000
Less: Revised residual value (\$150,000 + 100,000)	250,000
Balance to be depreciated	<u>1,875,000</u>
July 2014- Jan 2015 depreciation: [$\$1,875,000 \div (10 - 3 + 3)$ *6/12 years].....	<u>\$ 93,750</u>

2. Carrying amount = \$2,800,000 – (675,000 + 93,750) = \$2,031,250

Gain on disposal of building = \$2,500,000 – 2,031,250 = 468,750

QUESTION 3 (26 marks)

Part A

Req. 1

- a. Net Profit Margin = Net Earnings / Net Sales (or Net Income / Revenues)
= $\$67,183 / 1,694,643 = 0.04$
- b. Times Interest Earned = (Net Earnings + Int. Expense + Inc. Tax Expense) / Int. Expense
= $(\$67,183 + 19,894 + 24,373) / 19,894 = 5.6$
- c. Debt to Equity = Total Liabilities / Total Shareholders' Equity
= $\$1,185,619 / 496,555 = 2.39$
- d. Inventory Turnover = COGS / Average Inventory
= $\$959,307 / (86,057 + 277,656) / 2 = 5.28$
- e. Return on Assets = Net Earnings + Int. Expense (net of taxes) / Average Total Assets
= $\$67,183 + 19,894 (1 - 24,373 / 91,556) / (588,178 + 1,682,174) / 2 = 0.07$
- f. Quick Ratio = Quick Assets / Current Liabilities
= $(\$5,832 + 20,104 + 17,336 + 104,275) / 444,027 = \$147,547 / 444,027 = 0.33$

Part A, Req. 2

As potential investor the most relevant ratios are the Return on Assets and Net Profit Margin. The ROA measures how well management has used the total invested capital provided by shareholders and debtholders during the period. The NPM measures how much profit is earned as a percentage of revenues generated during the period. It is a measure of management's effectiveness in controlling revenues and expenses to generate earnings.

Part A, Req. 3

Additional information that would be relevant would include:

- Other measures of profitability, such as return on equity, quality of earnings, fixed assets turnover
- Leon's profitability ratios for the past few years
- Profitability and solvency ratios for competing companies
- Analysts' forecasts of EPS and recommendations to buy, hold or sell Leon's shares.

Part B
Req. 1

Beginning balance of Trade receivables	\$ 27,961
+ Net sales / Revenues	1,694,643
– Cash received from customers	<u> x</u>
= Ending balance of Trade receivables	\$ 104,275

→ Cash received from customers = \$1,618,329

Req. 2

Income taxes payable	13,511
Cash	13,511

Income Taxes Payable account:

Beg. Balance + Income taxes expense (current) – Payments = End. Balance

0 + \$25,646 – x = 12,135 → Payments for income taxes = \$13,511

Req. 3

Sales returns	478
Provision for product returns.....	478

Req. 4

Cash.....	168,192
Deferred warranty plan revenue	168,192
Beg. balance, Deferred warranty plan revenue.....	\$ 31,994 (14,743 + 17,251)
+ Sales of new warranty plans	X
– Reduction in deferred warranty due to repairs and replacement of products.....	<u>60,664</u>
= End. Balance, Deferred warranty plan revenue.....	139,522 (54,028 + 85,494)

→ Sales of new warranty plans = \$168,192

Req. 5

- The carrying amount of intangible assets would increase if Leon’s buys more intangibles.
- The carrying amount of goodwill would decrease if the re-valuation of goodwill at year end indicates impairment in its value.

Req. 6

Beginning balance of Retained earnings	\$423,099
+ Profit	67,183
- Dividends declared	<u>X</u>
= Ending balance of Retained earnings	\$462,035

→ Dividends declared = \$28,247

Beginning balance of Dividends payable	\$ 7,055
+ Dividends declared	28,247
- Dividends paid	<u>X</u>
= Ending balance of Dividends payable	\$ 7,063

→ Cash dividends paid = \$28,239

Req. 7

Leon would report these shares as a liability because they must be redeemed (paid back) after 10 years. Leon's statement of financial position reports "Redeemable share liability" as a non-current liability.

QUESTION 4 (19 marks)**Req. 1**

PV of principal = \$81,000,000 x 0.6730* =	\$ 54,513,000
PV of interest payments = \$81,000,000 x 5% x ½ x 16.3514*	33,111,585
Bond issue price =	<u>\$ 87,624,585</u>

* PV factor, n = 20, i=2% (Tables 1 and 2, respectively)

October 1, 2013

Cash	87,624,585	
Premium on bonds payable		6,624,585
Bonds payable		81,000,000

Req. 2

Donnie Ltd
Statement of Financial Position (partial)
As at December 31, 2013

Liabilities*Current Liabilities*

Bond interest payable	\$ 1,012,500 ^a
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Non-Current Liabilities

Bond Payable	81,000,000
Premium on Bond Payable	<u>6,488,331^b</u>
Carrying amount, bonds payable	87,488,331

Notes:

- a) Interest payable = (\$81,000,000 x 5% x 3/12) = \$1,012,500
b) Interest expense = (\$87,624,585 x 4% x 3/12 = \$876,246
Amortization of bond premium = \$1,012,500 – 876,246 = \$136,254
Premium on bond payable = \$6,624,585 – 136,254 = \$6,488,331

Req. 3

March 31, 2014

Interest Expense	876,246 ^a	[\$87,624,585 x 4% x 3/12]
Premium on Bond Payable	136,254 ^b	[\$1,012,500 – 876,246]
Bond Interest Payable	1,012,500	[See requirement 2 for calculation]
Cash		2,025,000

Req. 4

After Redemption on March 31, 2014

Bonds payable	24,300,000 ¹
Premium on bonds payable	1,905,623 ²

Note:

1. $\$81,000,000 (1 - 0.70) = \$24,300,000$
2. $(\$6,488,331 - 136,254) (1 - 0.70) = \$1,752,492 \times 0.30 = \$1,905,623$

a) Total interest paid through September 30, 2023:

$$\$2,025,000 + (\$24,300,000 \times 5\% \times 9.5 \text{ years}) = \$13,567,500$$

b) Total interest expense through September 30, 2023:

$$\$1,752,492 + (\$24,300,000 \times 5\% \times 9.5 \text{ years}) - \$1,905,623 = \$11,389,369$$

Req. 5

Students' answer to this question could differ substantially from the suggested solution. Please accommodate reasonable answers.

Both methods would result in the same amount of bond discount or premium being amortized over the life of the bond. Straight-line amortization results in equal amounts of interest expense over time, whereas EIM results in higher interest expense in the early years of the bond's life and lower amounts in the later years (premium bond). In most cases, both methods produce interest expense amounts that are not significantly different because the market interest rate does not usually differ very much from the market interest rates.

As a potential shareholder, I would prefer the method that results in lower net earnings so I can purchase the company's shares at a lower price than if net earnings were higher. This occurs in the early years of the bond's life when the straight-line method is used and in the later years if the effective-interest method is used. However, I would be indifferent between the two methods if the interest expense amounts are not materially different which would not affect my decision to invest in the company's shares.

QUESTION 5 (15 marks)

Req. 1 (13.5 Marks)

Neilson Corp.
Statement of Cash Flows (partial)
For the Year Ended December 31, 2013

Operating Activities

Net earnings	\$195,000	
Add: Depreciation – building	\$40,000	[Change in Acc. Depr.]
Depreciation – equipment	57,000	[25,000 = X – (46,000 – 14,000)]
Loss on sale of equipment	11,000	Amount given
Amortization of bond discount	4,000	Amount given
Increase in trade receivables	(77,000)	Amount given
Increase in inventory	(22,500)	Amount given
Increase in trade payables	10,000	Amount given
Decrease in taxes payable	(9,000)	Amount given
Increase in accrued liabilities	<u>16,000</u>	
<i>Cash from operating activities, net</i>		224,500

Investing Activities

Purchase of land	(40,000)	[\$140,000 = 100,000 + X]
Purchase of equipment	(38,000)	[-\$8,000 = X – 46,000]
Sale of equipment	3,000	[-\$11,000 = X – 14,000]
Purchase of building	(30,000)	Amount given
Goodwill	<u>(103,500)</u>	Amount given
<i>Cash from investing activities, net</i>		(208,500)

Note: The Company purchased land with a fair value of \$100,000 in exchange for its preferred shares.

Req. 2 (1.5 marks)

Interest paid	(95,000)	Amount given
Income taxes paid	(105,000)	[\$96,000 + 9,000]