

**Suggested Solution**  
**Final Examination**  
**Winter 2011**

**Question 1 (24 marks)**     *Multiple-choice*     (1.5 marks per correct answer)

1. A     $A = L + SE$ ;  $\$300,000 = \$180,000 + (\$100,000 + RE)$ ;  $\rightarrow RE = \$20,000$   
 $RE = 0$  (beg. of year)  $+ NI - D$ ;  $\$20,000 = 0 + NI - \$20,000$ ;  $\rightarrow NI = \$40,000$   
 $NI = R - E$ ;  $\$40,000 = \$380,000 - E$ ;  $\rightarrow E = \$340,000$
2. B     $A = L + SE$ ;  $\$560,000 + \$50,000 = (\$360,000 - \$20,000) + SE$ ;  $\rightarrow SE = \$270,000$
3. A
4. C
5. B
6. C
7. B
8. D
9. A     $AT \text{ ratio} = \text{Net Sales} / \text{Average Total Assets} = \$43,000 / [(\$51,000 + \$55,000)/2] = 0.811$
10. C    Prepaid insurance has expired (used) for 3 months  $\rightarrow$  Insurance expense =  $\$9,600 \times 3/24$
11. A
12. C    The beginning inventory for 2010 should be reduced by \$11,000 and the ending inventory for 2010 should be reduced by \$8,000. As a result, the COGS (BI + PUR – EI) for 2010 should be reduced by \$3,000. This causes the gross profit and profit before taxes to increase by \$3,000 each. The profit before taxes should be \$93,000 (\$90,000 + \$3,000).
13. A
14. A    Interest expense =  $\$48,000 \times 0.08 \times 6/12 = \$1,920$
15. C    Correct cash balance =  $\$1,265 + \$1,500 - (\$525 + 70) = \$2,170 = \$1,245 + \$975 - \$50$
16. A

## Question 2 (12 marks)

### Req.1

a.	Interest expense [ $\$24,000 \times \frac{2}{3} \times 6\% \times \frac{1}{12}$ ]	80	
	Cash		80
b.	Salaries expense [ $\$6,000 \times \frac{1}{3}$ ]	2,000	
	Salaries payable	4,000	
	Cash		6,000
c.	Cash	30,000	
	Credit card receivables	70,000	
	Sales revenue		100,000
	Cost of goods sold [ $\$100,000 \times 0.6$ ]	60,000	
	Merchandise inventory		60,000
	Sales returns and allowances	500	
	Cash		500
	Merchandise inventory [ $\$500 \times 0.6$ ]	300	
	Cost of goods sold		300
d.	Trade receivable ( $\$300 + \$5$ )	305	
	Cash		305
	Or		
	Trade receivables	300	
	Bank service charges	5	
	Cash		305

### Req. 2

Rent expense =  $\$18,000 \times (0.5 \text{ month} / 12 \text{ months}) = \$750$ ;      or  $\$18,000 \times 16/365 = \$789$ .

**Question 3 (34 marks)**Req. 1-- Adjusting journal entries, Dec. 31, 2010

a)	Prepayments .....	900	
	Insurance expense .....		900
b)	Interest receivable [ $\$30,000 \times 0.1 \times 4/12$ ] .....	1,000	
	Interest revenue .....		1,000
c)	Depreciation expense—building [ $\$320,000 \div 40$ years] .....	8,000	
	Depreciation expense—equipment .....	10,000	
	Accumulated depreciation—building .....		8,000
	Accumulated depreciation—equipment .....		10,000
d)	Retained earnings (or Dividends declared) .....	50,000	
	Dividends payable .....		50,000
e)	Office supplies expense [ $\$8,900 - \$600$ ] .....	8,300	
	Office supplies inventory .....		8,300
f)	Deferred rent revenue [ $\$6,000 \times 2$ months / 6 months] ....	2,000	
	Rent revenue .....		2,000
g)	Salaries expense .....	3,000	
	Salaries payable .....		3,000
h)	Income tax expense (as per requirement 2) .....	41,370	
	Income tax payable .....		41,370

Req. 2

Infometrix Inc.  
Income Statement  
For the Year Ended December 31, 2010

Sales revenue	\$983,000	
Less: credit card discounts	5,000	
sales returns and allowances	<u>20,000</u>	
Net sales	958,000	
Cost of goods sold	<u>590,000</u>	
Gross margin/profit	<u>368,000</u>	
Operating expenses		
Advertising expense	76,000	
Insurance expense	5,400	[6,300 – 900]
Salaries expense	123,000	[120,000 + 3,000]
Depreciation expense	18,000	
Office supplies expense	<u>8,300</u>	[8,900 – 600]
Total operating expenses	<u>230,700</u>	
Operating profit	137,300	
Other revenues and expenses		
Rent revenue	2,000	
Interest revenue	1,000	
Interest expense	<u>(2,400)</u>	
Profit before income taxes	137,900	
Income tax expense	<u>41,370</u>	[137,900 x 30%]
Profit	<u>\$96,530</u>	
Earnings per share = \$9.65 per share	[\$96,530 / 10,000 shares]	

Req. 3

Infometrix Inc.  
Partial Statement of Financial Position  
As at December 31, 2010

## Assets

## Current assets

Cash	\$54,000
Trade receivables	150,000
Note receivable	30,000
Interest receivable	1,000
Merchandise inventory	140,000
Office supplies inventory	600
Prepayments	<u>900</u>
Total current assets	376,500

## Property, plant and equipment (or Fixed assets)

Land	\$160,000	
Building	\$320,000	
Less: Accumulated depreciation	<u>48,000</u>	272,000 [40,000 + 8,000]
Equipment	\$200,000	
Less: Accumulated depreciation	<u>30,000</u>	<u>170,000</u> [20,000 + 10,000]
Property, plant and equipment, net		<u>602,000</u>

Total Assets \$978,500

Req. 4 (7 marks)

a. Age of the building at Dec. 31, 2010 = Accumulated Depreciation/Annual Depreciation  
= \$48,000 / \$8,000 = 6 years

b. Retained earnings, Dec. 31, 2010 = \$177,000 + \$96,530 – (\$12,000 + \$50,000)  
= \$211,530

c. Net profit margin = Profit / Net sales = \$96,530 / \$958,000 = 0.101 or 10.1%

“The net profit margin measures how much profit is earned from every sales dollar generated during the period.” (See textbook, page 182.)

d. Return on equity = Profit / Average shareholders' equity  
= \$96,530 / [(\$747,000\* + \$781,530\*\*) / 2] = 0.126 (12.6%)

\* Beginning shareholders' equity = \$570,000 + \$177,000 (based on list of unadjusted accounts).

\*\* Ending shareholders' equity = \$570,000 + \$211,530 (see 4 (b) above).

This ratio measures how much the company earned for each dollar of shareholders' investment. It reflects how well management has used the investment by shareholders during the period.

**Question 4 (16 marks)**

a.	Trade receivables	45,000,000	
	Cash	5,000,000	
	Sales revenue		50,000,000
	(\$50,000,000 x .90 = \$45,000,000)		
b.	Sales returns and allowances	500,000	
	Trade receivables		450,000
	Cash		50,000
	(\$500,000 x .90 = \$450,000)		
c.	Cash	42,000,000	
	Trade receivables		42,000,000
d.	Allowance for doubtful accounts	1,100,000	
	Trade receivables		1,100,000
e.	Cash	60,000	
	Allowance for doubtful accounts		60,000
	Or		
	Trade receivables	60,000	
	Allowance for doubtful accounts		60,000
	Cash	60,000	
	Trade receivables		60,000

**Req. 2 (3 marks)**

Zoftad Ltd.  
Statement of Financial Position (partial, comparative)  
December 31

	<u>2010</u>	<u>2009</u>
Current assets:		
:		
Trade receivables	\$8,450,000**	\$7,000,000
Less: Allowance for doubtful accounts	<u>211,250***</u>	<u>140,000*</u>
Net realizable value	<u>\$8,238,750</u>	<u>\$6,860,000</u>

\* \$7,000,000 x .02 = \$140,000.

\*\* \$7,000,000 + \$45,000,000 – \$450,000 – \$42,000,000 – \$1,100,000 = \$8,450,000

\*\*\* \$8,450,000 x .025 = \$211,250.

Req. 3 (2 marks)

AJE for bad debts expense

Bad debts expense	1,111,250	
Allowance for doubtful accounts		1,111,250

AFDA, ending = AFDA, beginning + Bad debts expense – Write-offs + Bad debts recovered

$$\$211,250 = \$140,000 + X - \$1,100,000 + \$60,000 \Rightarrow X = \$1,111,250$$

Req. 4 (3 marks)

AR turnover, 2010 = Net credit sales / Average net trade receivables

$$(\$45,000,000 - \$450,000) / [(\$6,860,000 + \$8,238,750)/2] = \$44,550,000 / \$7,549,375 = 5.90$$

AR turnover, per stated credit terms = 365 / 30 = 12.17 times

The trade receivables turnover is much worse than the stated credit terms (less than half). Zoftad's management appears to be doing a poor job of managing the company's receivables.

Alternatively, the average collection period is 61.9 days (365/5.90), which is double the credit period of 30 days. The company needs to improve on its efforts to collect cash from its customers.

Req. 5 (2 marks)

$$\text{Gross profit} = (\$50,000,000 - \$500,000) \times (1 - .40) = \$49,500,000 \times .60 = \$29,700,000.$$

**Question 5 (14 marks)**Reg. 1 (2 marks)

Amelie Ltd. uses first-in-first-out (FIFO) method. The table shows that the oldest items are recorded as sold first, and the recently purchased items are recorded as being left in the inventory.

Reg. 2 (5 marks)

Sep. 15	Inventory	33,000	[300 x \$110]
	Cash		33,000
Dec. 1	Cash	36,000	[200 x \$180]
	Sales		36,000
	Cost of goods sold	21,500	[50 x \$100 + 150 x \$110]
	Inventory		21,500

Reg. 3 (5 marks)

$$\text{COGS} = (300 \times \$90) + (350 \times 100) + \$21,500 = \$83,500$$

$$\text{Ending inventory} = (300 + 400 - 300 + 300 - 350 - 200) \times \$110 = \$16,500$$

$$\text{Inventory turnover} = \text{COGS} / \text{Avg. Inventory} = \$83,500 / [(300 \times 90 + \$16,500) / 2] = 3.84 \text{ times}$$

It means that during 2010 inventory was sold on average about 3.84 times. (1 mark)

Reg. 4 (2 marks)

$$\text{Difference in valuation of item A between cost and NRV} = 150 \times (\$110 - \$95) = \$2,250$$

Dec. 31	Cost of goods sold	2,250	
	Inventory		2,250
	Or		
	Loss due to write-down of inventory	2,250	
	Inventory		2,250