

2.96 - Management in Engineering, Fall 2004

Massachusetts Institute of Technology

Department of Mechanical Engineering

Instructors: Professor Jung-Hoon Chun and Professor Alexander d'Arbeloff

# **Quiz Review**

(fall 2003 quiz)

November 1, 2004

## Q1-2 CONSOLIDATED BALANCE SHEET

	2001
<b>Assets</b>	
Cash	100
Accounts Receivable	400
Inventory	(a)
Land	250
Property, plant, and equipment	600
<b>Liabilities and Stockholder's Equity</b>	
Accounts Payable	200
Bonds Payable	600
Contributed Capital	500
Retained Earnings	100
<b>Sales</b>	1000
<b>Expenses</b>	(500)
<b>Net Income</b>	(b)
<b>Dividends</b>	(c)

***Assets = Liabilities + Equity***

$$100 + 400 + (a) + 250 + 600 =$$

$$200 + 600 + 500 + 100$$

$$(a) = 50$$

***NI = Sales + Expenses***

$$(b) = 1000 + (-500)$$

$$(b) = 500$$

***End RE = Beg RE + NI - Dividends***

$$100 = 0 + 500 - (c)$$

$$(c) = 400$$

- (d) = 800
  - (e) = 900
  - (f) = 1600
  - (g) = 300
  - (h) = 1500
  - (i) = 500
- 
- Note: negative numbers should be written w/ ( )  
Ex. -\$500 → (500)

# Q1-3 Cash Flow Statements

\*What is the purpose of a cash flow statement?

- A CFS reconciles changes in the cash account of a company

\*What are the three sections of a cash flow statement?

- Operating Activities

- Investing Activities

- Financing Activities

\*Must be able to use a balance sheet and income statement to generate a cash flow statement.

## Q1-3 Consolidated Balance Sheet\*

As of December 31, 2002

(Dollars in millions)

2002

2001

### Assets

Current Assets:

○ Cash	806	↑ 203	603
○ Short Term Investments	0	↓ 5	5
○ Accounts Receivable	475	↑ 150	325
○ Inventory	3,100	↑ 300	2,800
Other Current Assets	<u>223</u>	↑ 11	<u>212</u>
<b>Total Current Assets</b>	<b>4,604</b>		<b>3,945</b>
Property, Plant, and Equipment			
┆ Land	2,010	↑ 120	1,890
┆ Buildings and leaseholds	4,400	↑ 600	3,800
┆ Equipment and Fixtures	1,730	↑ 200	1,530

\*Just top portion of Consolidated Balance Sheet

# Q1-4 Handling Transactions

- Rule: Debit = Left  
Credit = Right

<u>Assets</u>	
increase	decrease

<u>Liabilities</u>	
dec	inc

<u>Equity</u>	
dec	inc

1. Firm purchases a fancy \$X testing machine and receives a bill due in 30 days`

- Equipment would inc by \$X
- Accounts payable would inc by \$X

2. The firm issues a 10 year bond for \$Y  
(assuming firm receives immediate cash for bonds)

- Cash would inc by \$Y
- Short-term debt would inc by \$Y

# Ratios

- asset turnover
- debt to equity
- ROE
- SGA
- profit margin
- gross margin
- current ratio
- days receivable
- ROA