



uOttawa
 école de gestion
 School of Management

Accounting Quiz

ADM 1300 – Introduction to Business Management

Professor: P. Koppel

Duration: 1 hour 20 minutes

Instructions:

- 1) This quiz consists of five questions: Balance Sheet, Income Statement, Financial Ratios, Breakeven Point, and Economic Order Quantity (20 marks for each question).
- 2) Complete each Problem questions in the space provided.
- 3) No notes, reference materials of any type (including dictionaries), or any electronic devices other than a calculator (which must have a clear memory) are permitted in the exam room.
- 4) Write in a legible fashion. Show all your work. Take each answer to two decimal places.
- 5) Please complete the Statement of Academic Integrity below with your signature.
- 6) You must return your quiz to a proctor once you have completed the quiz or time has expired.

Question 1: 15 (20 points)
 Question 2: 20 (20 points)
 Question 3: 8 (20 points)
 Question 4: 20 (20 points)
 Question 5: 2 (20 points)

TOTAL:

65/100

LAST NAME (please PRINT):

OU

FIRST NAME (please PRINT):

BENSON

STUDENT #: 5216848

Statement of Academic Integrity

The School of Management does not condone academic fraud, an act by a student that may result in a false academic evaluation of that student or of another student. Without limiting the generality of this definition, academic fraud occurs when a student commits any of the following offences: plagiarism or cheating of any kind, use of books, notes, mathematical tables, dictionaries or other study aid unless an explicit written note to the contrary appears on the exam, to have in his/her possession cameras, radios (radios with head sets), tape recorders, pagers, cell phones, or any other communication device which has not been previously authorized in writing.

Statement to be signed by the student:

I have read the text on academic integrity and pledge not to have committed or attempted to commit academic fraud in this examination.

Signed: Benson

Note: an examination copy or booklet without that signed statement will not be graded and will receive a final exam grade of zero.

15/20

1.) The ABC Co. provides the following data to you:

✓ Accounts payable	400,000	X	other income	38,925
✓ Office supplies	14,000	X	✓ investments	4,200,000 X
✓ Accounts receivable	222,000	X	purchases	66,275
Net Sales	248,000		✓ bonds payable	1,200,000 X
✓ Interest payable	10,000	X	✓ inventories	589,000 X
✓ Common stock	10,000,000	X	✓ cash	42,500 X
Sales Returns	12,222		advertising	78,500
✓ Wages payable	48,000	X	tax rate	42%
✓ Equipment	10,000,000	X	✓ taxes payable	45,000 X
✓ Land	4,200,000	X	✓ notes payable	120,000 X
✓ Notes payable – 2010	18,500,000	X	✓ retained earnings	942,500 X
✓ Goodwill	1,500,000		commissions	321,000
✓ Marketable securities	148,000	X	✓ notes receivable	114,000 X
✓ Buildings	14,000,000	X	✓ prepaid insurance	36,000 X
Useful life of buildings	20 years		age of buildings	4 years
Useful life of equipment	10 years		age of equipment	1 year

Prepare a Balance Sheet as of December 31, 2007. (20 marks)

ABC Co
Balance Sheet
As of Dec. 31, 2007

<u>Assets</u>	
<u>Current Assets</u>	
Cash	\$ 42,500
Market securities	148,000
Acc. Receivable	222,000
Notes Receivable	114,000
Office Supplies	14,000
Inventories	589,000
Prepaid Expense	36,000
Total Current Assets	\$ 1,165,500
<u>Fixed Assets</u>	
Building	14,000,000
Less. Dpr	2,800,000
	11,200,000
Equipment	10,000,000
Less. Dpr.	1,000,000
	9,000,000
Land	4,200,000
Total Fixed Assets	\$ 24,400,000
<u>Other Assets</u>	
Investments	4,200,000
Good Will	1,500,000
Total Other Assets	\$ 5,700,000
Total Assets	\$ 31,265,500

<u>Liabilities</u>	
<u>Current Liabilities</u>	
Acc. Payable	\$ 400,000
Interest Payable	10,000
Wages Payable	48,000
Taxes Payable	45,000
Note Payable	120,000
Total Current Liab.	\$ 623,000
<u>Long term Liabilities</u>	
Notes payable (2010)	\$ 18,500,000
Bonds payable	1,200,000
Total L.T.L	\$ 19,700,000
<u>Shareholders Equity</u>	
Common Stock	\$ 10,000,000
Retained Earnings	942,500
Total S.E.	\$ 10,942,500
Total Liabilities and Shareholders Equity	\$ 31,265,500

20/20

2.) You are given the following data from the DEF Corporation. Prepare an Income statement as of December 31, 2007. (20 marks)

✓ Advertising	126,000	cash	425,000
✓ Taxes	35%	Common stock	12,750,000
✓ Purchases	1,740,000	✓ Salaries	3,455,000
✓ Commissions	144,450	✓ other income	415,000
Wages payable	1,242,000	✓ delivery expense	72,500
✓ Insurance expense	360,000	✓ sales returns	400,000
✓ Rent expense	2,400,000	✓ Inventory, Jan. 1, 2008	1,200,000
✓ Inventory, Dec. 31, 2008	740,000	✓ Gross Sales	15,400,000 X

DEF Corporation
Income Statement
As of December 31, 2008

Gross Sales	15,400,000	
Less Sales Return	<u>400,000</u>	
Net Sales		\$ 15,000,000 2
Less Costs of Goods Sold:		
Beginning Inventory	1,200,000	
Purchases	<u>1,740,000</u>	
Total Goods on hand		\$ 2,940,000
Ending Inventory		<u>740,000</u>
Total C.O.G.S		\$ 2,200,000 4
Gross Profit		\$ 12,800,000
<u>Operating Expenses</u>		
General and Administrative		
Salaries		\$ 3,455,000
Insurance Exp		360,000
Rent Exp		<u>2,400,000</u> 3
Total General and adm. -		\$ 6,215,000
Selling		
Commissions		\$ 144,450
Advertising		126,000
Delivery Exp		<u>72,500</u>
Total Selling		\$ 342,950 3
Total Operating Expense		\$ 6,557,950
Other Income		<u>\$ 415,000</u>
Income before tax		\$ 6,657,050
Tax Rate (35%)		<u>2,329,967.50</u> 4
Net Income		<u>\$ 4,327,082.50</u> 4

8/20

3.) Based on the following data, calculate the ratios as required for ABC as of the year ended 2007. Show the formula and the answer for each. (20 marks)

Accounts Receivable	224,500 ✓	Retained Earnings	450,000
Dec. 31, 2007, inventory	125,000 ✓	Cash	275,000 ✓
Common Stock	1,200,000	Purchases	445,000 ✓
Marketable Sec.	225,000 ✓	Prepaid Expenses	75,000
Notes Receivable	42,000 ✓	Income before tax	2,225,000
Sales Returns	250,000	Gross Sales	4,150,000
Tax Rate	35%	Current Liabilities	375,000
January 1, 1007, inventory	75,000		

Current Ratio:
$$\text{current Ratio} = \frac{966,500}{375,000} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\approx 2.58 \text{ (2)}$$

Acid Test Ratio:
$$\text{Acid Test Ratio} = \frac{966,500 - (125,000 + 75,000)}{375,000} = \frac{\text{current assets} - (\text{Inventory} + \text{prepaid expens})}{\text{current liabilities}}$$

$$\approx 2.04 \text{ (2)}$$

Inventory Turnover
$$\text{Inventory Turnover} = \frac{395,000}{100,000} = \frac{\text{COGS}}{\text{Average Inventory}}$$

$$\approx 3.95 \text{ days (2)}$$

Accounts Receivable Turnover
$$\text{A/R Turnover} = \frac{224,500}{11,369.86} = \frac{\text{Accounts Receivable}}{\text{Average Daily Sales}}$$

$$\approx 19.75 \text{ days}$$

Return on Investment
$$\text{Return on Investment} = \frac{1,446,250}{1,650,000} = \frac{\text{Net Income}}{\text{Owners Equity}}$$

$$\approx 0.88 \text{ (2)}$$

4.) You are given the following data:

Selling Price per unit \$48.00

Raw Materials price per unit \$2.50

Monthly Salaries \$6,000

Monthly Insurance costs \$500

Wages per unit \$9.75

Overhead costs per unit \$2.75

Calculate the Breakeven Point in Sales Dollars (5 marks)

$$SP = 48$$

$$VC = 2.5 + 9.75 + 2.75 = 15$$

$$FC = (6000 \times 12) + (500 \times 12) = 78,000 \text{ (2)}$$

$$B.E.P. = \frac{FC}{1 - \frac{VC}{SP}} = \frac{78,000}{1 - \frac{15}{48}} = \frac{78,000}{1 - 0.31} = \frac{78,000}{0.69} \approx 113,043.48$$

∴ The Breakeven point in Sales is £ 113,043.48 (3)

Calculate the Breakeven Point in Units (5 marks)

$$48x = 15x + 78000$$

$$33x = 78000$$

$$x \approx 2,363.64$$

∴ The Breakeven point in units is 2,363.64 units

If the Selling Price increases by 20% and the Variable costs increase by 5%, what will the dollar amount of the new Fixed Costs of the organization be? (10 marks)

10/10 The Fixed Costs will not change because they are fixed.

\$ 78,000

5.) In ABC Company's production run, the monthly demand for widgets is 12000 units; this demand does not fluctuate at all during the year. Each widget costs ABC \$125.00 in addition to an ordering cost of \$50 every time an order is placed (no matter how many widgets are ordered each time). If a widget sits on ABC's inventory shelf for a year, it costs ABC 14% of the unit price.

- a.) An arbitrary decision to purchase widgets 12 times a year in equal amounts is made by the Purchasing Manager of ABC. What are the annual costs to ABC if this decision is implemented? (7 marks)

Cost for unit = $125 \times 12000 = 1,500,000$ \$

Cost for order = $50 \times 12 = 600$ (2)

Cost to carry = $(.14)(125)(500) = 8,750$

Annual Costs = $1,509,350.00$

$\frac{A}{V2}$
2

(2/7)

- b.) What is the Economic Order Quantity? (6 marks)

$$EOQ = \sqrt{\frac{2(A)S}{Ic}}$$

$$= \sqrt{\frac{2(12000)(50)}{(.14)(125)}}$$

$$= \sqrt{68,571.43}$$

$$\approx 261.86$$

(0/6)

- c.) If the EOQ is used, what are the annual costs to ABC? (7 marks)

Cost for unit = $125 \times 12000 = 1,500,000$

cost for order = $50 \times \left(\frac{12000}{261.86}\right) = 2,291.50$

cost to carry = $(.14)(125)(130.93) = 2,291.28$

Annual Costs = $1,504,582.78$

(0/7)

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Question 2:	<u>20</u>	(20 points)	
Question 3:	<u>13</u>	(20 points)	
Question 4:	<u>6</u>	(20 points)	
Question 5:	<u>18</u>	(20 points)	
TOTAL:			<u>60</u>

LAST NAME (please PRINT): TANG

FIRST NAME (please PRINT): KEVIN

STUDENT #: 5582638

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Question 1: Breakeven Point Analysis

You are given the following data:

Monthly lease expense ✓	\$9,600.00
Selling price per unit ✓	\$15.00
Wages per unit produced ✓	\$3.00
Monthly salaries ✓	\$10,000.00
Yearly rent expense ✓	\$140,000.00
Overhead cost per unit produced ✓	\$5.00
Raw materials cost per unit produced ✓	\$4.00

a) How many units need to be produced to at least breakeven? (10 points)

Fixed Cost = $9600 + 10000 + 140000 = 159600$

Variable cost = $3 + 5 + 4 = 12$

Revenue = 15

~~$x = 53200$~~

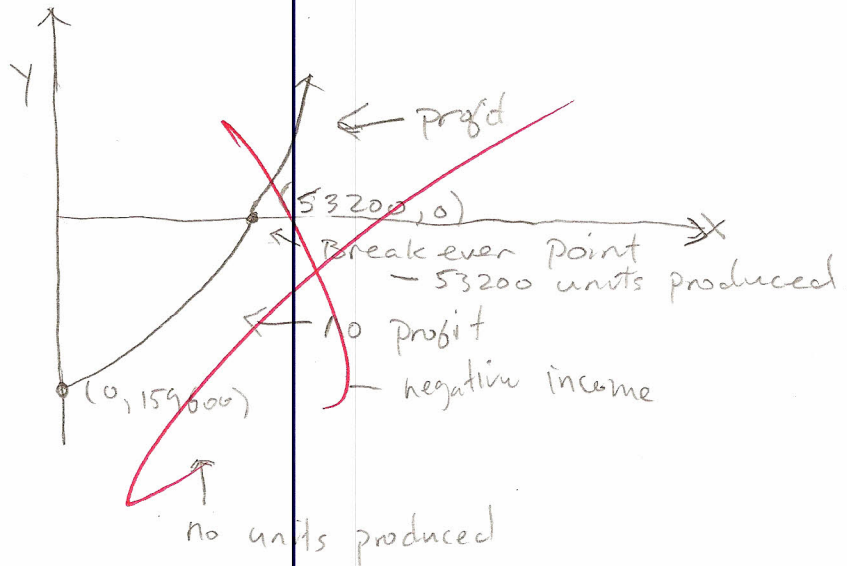
Revenue = fixed + variable

$15x = 159600 + 12x$

$3x = 159600$

53200 units must be sold to break even

b) Using the above information, draw a breakeven diagram and properly label all appropriate points. (10 points)



3

Question 2: Economic Order Quantity

You are given the following data for the ABC Corporation:

Cost per unit: \$100.00

Annual demand for good: 500,000 units

Cost to place an order: \$50.00

Annual cost to carry inventory: 15%

- a) Calculate the Economic Order Quantity. (5 points)

$$EOQ = \sqrt{\frac{2AS}{iC}}$$

$$EOQ \approx 1825.74$$

$$= \sqrt{\frac{2(500000)(50)}{(.15)(100)}}$$

$$\approx \sqrt{3333.33}$$

- b) If the EOQ is used, what is the annual cost to the company? (5 points)

$$C = \text{Cost per unit} = 500000 \times 100 = \$50,000,000$$

$$S = \text{Cost to order} = \frac{500000}{1825.74} \times 50 \approx \$13693.08$$

$$I = \text{Cost to carry inventory} = \frac{1825.74}{2} \times (100)(.15) = \$13693.05$$

$$\text{Total Annual Cost of the company} = \$50,027,386.13$$

- c) If ABC Corporation decides to order in 10 equal installments instead of using the E.O.Q., what would be the annual costs to the company? (10 points)

$$C = \text{Cost per unit} = 500000 \times 100 = \$50,000,000$$

$$S = \text{Cost to order} = 50 \times 10 = \$500$$

$$I = \text{Cost to carry inventory} = \frac{500000}{2} \times (100)(.15) = \$375000$$

$$\text{Total Annual Cost of the company} = \$50,375500$$

10/20

Question 3: Balance Sheet

Prepare a balance sheet for DEF Corporation as of December 31, 2006, using the following appropriate information. (20 points)

Sales X	\$250,000 ✓	Cash ✓	\$242,500 ✓
Retained Earnings ^e	\$249,000 ✓	Acc. Depreciation Buildings	\$3,000,000 ✓
Investments ✓	\$1,499,500 ✓	Prepaid expenses ✓	\$131,000 ✓
Salary expenses	\$400,000 ✓	Common Stock ✓	\$5,005,000 ✓
Land ✓	\$1,480,000 ✓	Taxes Payable ✓	\$550,000 ✓
Goodwill	\$340,000 ✓	Gross Profit X	\$222,000 ✓
Accounts payable ✓	\$100,000 ✓	Buildings ✓	\$10,000,000 ✓
Wages payable ✓	\$1,400,000 ✓	Notes receivable ✓	\$122,000 ✓
Marketable securities	\$1,112,000 ✓	Inventories ✓	\$1,986,000 ✓
Notes payable ✓	\$65,000 ✓	Equipment ✓	\$2,000,000 ✓
Useful life of equipment ✓	10 years ✓	Bonds Payable ✓	\$950,000 ✓
Notes payable (due in 2010)	7,450,000 ✓	Accounts receivable ✓	\$506,000 ✓
Interest Payable ✓	\$50,000 ✓	Equipment	\$1,000,000 ✓
Age of equipment as of Dec. 31/06	36 years ✓		

DEF Corporation
Balance sheet
as of Dec 31 2006

Assets

Current Assets

Cash	242,500
Marketable securities	1,112,000
Accounts receivable	506,000
Notes receivable	122,000
Inventories	1,986,000
Prepaid Expenses	131,000
Total Current Assets	4,995,000

Fixed Assets

Land	1,480,000
Building	10,000,000
less: Acc. Depreciation Building	3,000,000
Building Book value	7,000,000
Equipment	2,000,000
less: Acc. Depreciation equipment	600,000
Equipment book value	1,400,000
Total Fixed Assets	9,880,000

Other Assets

Investment	1,499,500
Good will	340,000
Total other Assets	1,839,500
Total Assets	\$15,819,000

Liabilities

Current liabilities

Accounts payable	100,000
Wage payable	1,400,000
Notes payable	65,000
Interest payable	50,000
Bonds payable	950,000
Tax payable	550,000
Total Current liabilities	3,115,000

Longterm liabilities

Notes payable (due 2010)	7,450,000
Total Liabilities	10,565,000

shareholders equity

Common stock	5,005,000
Retain Earning	249,000
Total share holders equity	5,254,000

Total Equity and liability \$15,819,000

(13)

Question 4: Income Statement

You are given the following data. Prepare an Income Statement for XYZ Corporation for the year ended December 31, 2005 (20 points)

Tax rate	35%
Sales returns ✓	\$1,000,000 ✓
Gross Sales ✓	\$20,000,000 ✓
Jan. 1, 2005 Inventory ✓	\$1,475,000 ✓
Other Expenses ✓	\$300,000 ✓
Accounts receivable ✓	\$200,000 ✓
Rent expense ✓	\$180,000 ✓
Building ✓	\$4,000,000 ✓
Other Income ✓	\$700,000 ✓
Prepaid Expense ✓	\$25,500 ✓

Purchases ✓	\$400,000 ✓
Cash ✓	\$500,000 ✓
Delivery Expense ✓	\$15,000 ✓
Advertising Expense ✓	\$220,000 ✓
Taxes Payable ✓	\$830,000 ✓
Dec. 31, 2005 Inventory ✓	\$300,000 ✓
Salaries expense ✓	\$5,000,000 ✓
Commissions ✓	\$1,400,000 ✓
Lease Expense ✓	\$220,000 ✓
Goodwill ✓	\$225,000 ✓

XYZ Corporation
Income Statement
For the Year end Dec 31 2005

Revenue
Gross Sales \$ 20 000 000
less: Sales return 1 000 000
Net sales

\$ 19 000 000 2

Cost of good sold
Jan 1 2005 inv. 1 475 000
Purchases 400 000
Total good on hand 1 875 000
Dec 31 2005 inv. 300 000
Total cost of goods sold

1575000 4

Operation Expenses
office & administrative
rent expense 180 000
Salaries Expense 5 000 000
Commissions 1 400 000
Total office & admin 6580000 ✓

205000 ✓

Selling
Delivery expense 15 000
Advertis expense 220 000
Total selling expense 205 000

Total operating expense

Other expense & income
other income 700 000
less: other expense 300 000
Total other expense & income 400 000

400 000

17620000 ✓
6167000 ✓
\$ 11453000 ✓

Income before tax
less Tax (35%)
Net income

6

Question 5: Accounting Ratios

Given the following data, prepare the ratios as required as of December 31, 2005. Please show the formula for each ratio as part of your answer. (20 points)

Taxes Payable	700,000
Accounts receivable	2,000,000
Sales	28,000,000
Retained Earnings	1,500,000
Notes Payable	3,000,000
Inventory (Jan.1, '05)	2,000,000
Sales Expense	350,000
Prepaid expenses	340,000

Accts. Payable	500,000
Mkt. Securities	700,000
Common stock	8,000,000
Net Income	3,000,000
Inventory (Dec.31,'05)	4,000,000
Purchases	10,000,000
Cash	1,000,000

a) Inventory Turnover

$$\text{Inventory turnover} = \frac{\text{COGS}}{\text{Avg inventory}}$$

$$= \frac{8000000}{3000000} = 2.67 \text{ units}$$

4

b) Acid Test Ratio

Acid Test Ratio

$$= \frac{\text{Current Assets} - (\text{Inventory} + \text{PP. Exp})}{\text{Current liabilities}}$$

$$= \frac{3700000}{4200000} = .88$$

4

c) Average Collection Period

Average collection Period

$$= \frac{\text{Accounts receivable}}{\text{Average net sales}}$$

$$= \frac{2000000}{75753.42} = 26.40 \text{ days}$$

d) Current Ratio

Current ratio

$$= \frac{\text{Current Assets}}{\text{Current liabilities}}$$

$$= \frac{8640000}{4200000} = 1.91$$

4

e) Return on Investment

ROI

$$= \frac{\text{Net income}}{\text{Owner's Equity}}$$

$$= \frac{3000000}{9500000} = 0.32$$

4

18