

**QUESTION 1 (Show your work where possible)**

On January 1, 20x1 your company purchased a new piece of equipment for \$10,000. You estimate that the equipment will last about 8 years and then be worth \$1,400. Use this information for the following parts of this question.

a) The straight line depreciation expense for the second year you have the equipment would be:

- A \$2,500
- B \$1,250
- C \$2,150
- D \$1,075
- E \$8,025

$$\frac{10,000 - 1,400}{8} = \$ 1,075$$

b) The accumulated depreciation account at the end of the second year would have a balance of:

- A \$1,250
- B \$2,150
- C \$1,075
- D \$2,500
- E \$8,025

$$2 \text{ yrs } \quad 1,075 \times 2 = \underline{\underline{\$ 2,150}}$$

c) The Book Value (also called net fixed assets) at the end of the second year would be:

- A \$7,500
- B \$6,450
- C \$7,850
- D \$10,000
- E \$86,000

$$= 10,000 - 2,150 = \underline{\underline{\$ 7,850}}$$

d) In what financial statements do each of these values from part a, b and c above appear, and what role do they play in these financial statements?

DEP. EXP (1075) - NET INCOME AS EXPENSE  
(a) - Role - spread capital cost out over useful life of equipment.

BOOK VALUE - B/S as an asset value  
(b,c) (2150 + 7850) - Role - show value of asset based on value to generate limited revenue.

**QUESTION 2**

Listed below is information for Joe's Manufacturing Plant, Inc. at December 31, 2008 and their balances. The values listed for the Income Statement (e.g., revenue & expenses) are for the year ending 2008. The values listed for the Balance Sheet (e.g., assets, liabilities and equity) are the amounts at the end of the year 2008. Inventory, A/P and A/R were at a value of zero at the beginning of 2008.

Accounts Payable	\$ 100,000
Accounts Receivable	60,000
Accumulated Depreciation (building)	40,000
Accumulated Depreciation (equipment)	20,000
Advertising Expense	15,000
Building Original Cost	200,000
Cash on Hand	59,000
Common Stock	100,000
Cost of Goods Sold	300,000
Land	20,000
Equipment Original Cost	121,000
Inventory (of goods ready to sell)	90,000
Depreciation Expense for equipment for 2008	20,000 included in accumulated depreciation above
Depreciation Expense for building for 2008	20,000 included in accumulated depreciation above
Long term loan total principle of 90,000 of which:	
a) 10,000 principal is to be paid within one year. They paid this same amount last year as well.	
b) 10,000 interest expense paid in the year 2008	
Rent Expense	60,000
Retained Earnings	200,000
Sales in Cash	850,000
Salary Expense	160,000
Tax Rate	30%
Dividends paid during 2008	21,500
Utilities Expense	10,000

	2007 Dec 31	2008 Dec 31
Common Stock	\$ 40,000	\$ 100,000 (from above table)
Retained Earnings	\$ 8,000	\$ 200,000 (from above table)
<b>Total Owners' Equity</b>	<b>\$ 48,000</b>	<b>\$ 300,000</b>

- a) Complete an Accrued Net Income Statement for the year ending 2008 including all required adjustments. Please include tax, dividend and retained earning values in this statement (include these values in the appropriate places of course). A basic format has been provided below. You may require additional items, organization and formatting.

Joe's Manufacturing Plant, Inc.	
Accrued Net Income, Jan. 1 to Dec 31, 2008	
Revenue	
CASH SALES	850,000
AIR END-BEG 60-0	60,000
INV END-BEG 90-0	90,000
<b>TOTAL REVENUE</b>	<b>\$ 1,000,000</b>
Expenses	
VARIABLE COST	
COGS	300,000
AIP END-BEG 100-0	<del>100,000</del>
FIXED COST	
ADY EXP	15000
DEP ✓	20000
DEP ✓	20000
INTEREST EXP	10000
RENT ✓	60,000
SALARY ✓	160,000
UTILITY ✓	10,000
<b>TOTAL EXPENSE</b>	<b>695,000</b>
Net Income	305,000
TAX (30%)	91,500
NI after tax	213,500
DIVIDEND	21,500
	<b>192,000</b>

b) Complete a Balance Sheet for Dec 31, 2008. Please categorize and format assets & liabilities as current and long term. A basic format has been provided below. You may require additional organization, items and formatting.

Joe's Manufacturing Plant, Inc. Balance Sheet: Dec 31, 2008	
Assets	Liabilities
<b>CURRENT</b> AIR 60,000 Cash 59,000 INV <u>90,000</u> 209,000	<b>CURRENT</b> A/P 100,000 LT Due w/ 1 year <u>10,000</u> 110,000
<b>LONG TERM</b> BLDG PP-DEP 200 - 40 = 160,000 EQ WIP PP-DEP 121 - 20 = 101,000 LAND 20,000 <u>281,000</u>	<b>LONG TERM</b> LOAN <u>80,000</u> 80,000  TL 190,000
TA 490,000	Shareholders' Equity
	COMMON STOCK 100,000 RETAINED EARNINGS <u>200,000</u> TE 300,000 TL + SE 490,000

EXTRA  
INFO

BALANCED

$$A = L + OE$$

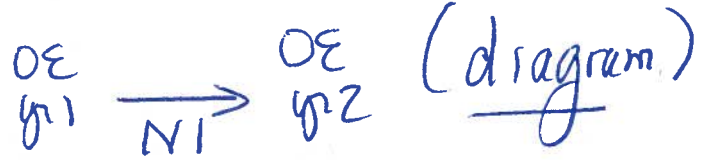
$$490,000 = 190,000 + 300,000$$

c) Briefly explain how the net income and balance sheet are linked. A diagram would be beneficial to the explanation. Hint: the term "financial progress" and statement of owner equity with values from the parts a and b may be helpful in the explanation.

- FINANCIAL PROGRESS - ↑ OE (↑ A OR ↓ L) USING NET INCOME

5

STMT OF OE	
OE	48,000
+ NI	213,500 <del>192,500</del>
- DIV	21,500
+ CONTRIB	60,000
OE	<u>300,000</u>



- NI USED TO ↑ A & ↓ L ∴ ↑ OE  
NI FLOWS INTO B/S STOCKS OF A, L, & OE

d) Assuming you know the firm's accrued net income, could you use a net worth statement (and the associated values) instead of balance sheet statement (and associated values) when completing a Statement of Owner's/Shareholders' Equity? Explain why or why not? Hint: be sure you clearly outline the net worth and balance sheet statements in your explanation.

4

NW = A + L AT Mkt VALUE TO GET NW  
B/S = A + L AT BOOK VALUE TO GET OE

- CANNOT USE NW AS INCLUDES ↑ OR ↓ OF Mkt VALUE + ↓ ABILITY TO TRACK FINANCIAL PROGRESS USING STMT OF OE WHERE Δ OF OE BASED ON NI + ↑ OF OE + DIVIDEND

**QUESTION 3**

Financial statements are important in that they are used by a large number of audiences (e.g., shareholders, managers, creditors, investors) to assess various financial aspects of the business. What procedures or rules (as discussed in class) are used to maintain the integrity and comparability of financial statement information? Hint: examples of these procedures or rules are always a good idea.

4

GAAP - EX. REVENUE RECOGNITION, MATCHING, & OTHERS  
CONSERVATISM/MATERIALITY

- RULES BUSINESS REQU'D TO FOLLOW  
SO STMTS CAN BE MORE EASILY  
ASSESSED &/OR COMPARED

#### QUESTION 4

Answer the questions based upon the following information:

**Company Name**  
**Accrued Net Income**  
**For the Year ending Dec 31, 20X1**

Accrued Revenue	\$ 500,000
Accrued Expenses	\$ 400,000
Accrued Net income	\$ 100,000

**Company Name**  
**Cash Flow Statement/Budget**  
**For the Year ending Dec 31, 20X1**

Net Cash Flow from Operations	(\$ 200,000)
Net Cash Flow from Investing	0
Net Cash Flow from Financing	0
Net Cash Increase during the Year	(\$ 200,000) plus
Cash, beginning of year	\$ 250,000 equals
Cash, end of year	50,000

- a) Outline three reasons as to why the accrued net income (positive \$100,000) could be so different from the net cash flow from operations (negative \$200,000). Assume there are no errors or missing values.

4  
AIR  
AIP  
INVENTORY  
PREPAID EXPENSE  
DEPRECIATION  
ANY 3 OF THESE

- b) As a business owner, which of accrued net income or cash flow budget should be considered more important to prepare? Be sure to include a brief description of the role of each of these statements in your answer.

4  
- ACC NI → TRUE PROFITABILITY BASIS  
GAAP  
- CF → LIQUIDITY

BOTH IMPORTANT AS THEY OFFER DIFFERENT PERSPECTIVE TO SAME/SIMILAR TRANSACTIONS.

- c) Can you suggest two additional financial statements the business managers and owners may want to develop for this business? Be sure you briefly explain why they should develop these additional statements and what they can tell about the business from those statements.

4

NW - A+L AT MKT VALUE TO DEFINE SOLVENCY  
 B/S - A+L AT BOOK VALUE TO DEFINE FINANCIAL  
PROGRESS

### QUESTION 5

Briefly describe the major differences between the following (2 to 3 major differences are fine)

- a) Capital assets versus non-capital assets

4

CAPITAL ASSETS - OWN > 1 YR, ~~USE TO~~  
 Ex/ BLDG EQUIP. - USE TO GENERATE GOODS/SERV  
TO GENERATE PROFIT  
 - DEPRECIATE TO SHOW US AGE.

NON-CAPITAL - OWN < 1 YR  
 Ex/ - INVENT. - NOT DEPRECIABLE  
 - CASH

- a) Depreciation expense and principal payment associated with capital assets

4

DEPRECIATION - HOW ~~THE~~ CAPITAL ASSET IS  
USED + COST ALLOCATED OVER USEFUL  
 LIFE. OPERATING COST ON NET INCOME

PRINCIPAL PMT - HOW CAPITAL ASSET IS  
PAID OVER YOUR CHOICE OF TIMELINE.  
FINANCIAL COST IN CASH FLOW,

MAIN FOCUS - SECURITY, CONTROL + DECISION MAKING +  
PMT (FIXED vs VARIABLE)

QUESTION 6

a) When purchasing a capital asset you can pay for it using debt or equity. Briefly describe two pros and two cons for each of these types of financing.

	DEBT	EQUITY
Pro 1	<ul style="list-style-type: none"> <li>- FIXED PMT EVEN IF NI ↑</li> <li>- INTEREST IS EXP</li> </ul>	<ul style="list-style-type: none"> <li>- VARIABLE DIVIDEND OR % OF NI REQUIRED IF NI ↑ ↓. (NOT FOREVER)</li> </ul>
Pro 2	<ul style="list-style-type: none"> <li>- CAN OBTAIN SHORT OR LONG TERM LOANS</li> <li>- NO SAY IN BUSINESS</li> </ul>	<ul style="list-style-type: none"> <li>- NO SECURITY REQUIRED</li> <li>- NO REQUIREMENT TO PAY ORIGINAL AMT BACK</li> </ul>
Con 1	<ul style="list-style-type: none"> <li>- FIXED PMT REQUIRED IF NI ≠ 0 OR LOW (FINANCIAL RISK)</li> </ul>	<ul style="list-style-type: none"> <li>- DIFFICULT FOR SMALL OR UNKNOWN OR NEW BUSINESSES TO OBTAIN</li> <li>- DIVIDEND AFTER TAX</li> </ul>
Con 2	<ul style="list-style-type: none"> <li>- SECURITY REQUIRED</li> <li>- PAY BACK ORIGINAL AMT BORROWED</li> </ul>	<ul style="list-style-type: none"> <li>- USUALLY VOTE OR HAVE A VOICE IN DIRECTION OF BUSINESS.</li> <li>- DOUBLE TAX (IND + CORP)</li> </ul>

b) How is crowd funding/crowdsourcing (such as the examples we viewed in class) different from standard equity funding? Be sure you note how it is different for the business that is obtaining the funds and for the person/firm providing the money.

- NO SPECIFIC VOTE RIGHTS OR EQUITY PROVIDED
- NO % OF NI OR DIVIDEND DEFINED
- NO OWNERSHIP OF THE COMPANY WHEN PERSON INVEST/GIVES MONEY.

### QUESTION 7

a) If a business has a positive net worth is it always profitable (on an accrual basis)? Please answer and then explain your answer. Be sure to define the terms "positive net worth" and "profitable" and provide an example of how this specific scenario can occur in the explanation.

4

- NW CAN ↑ DUE TO ↑ ASSET WITH MKT VALUE APPRECIATION & THAT DOES NOT REQUIRE NI > 0 OR PROFIT > 0.

$$\underline{NW} = TA - TL \text{ AT MKT VALUE}$$

$$\underline{PROFIT} = TR - TE \text{ AT ACCRUED NET INCOME}$$

- NW CAN ↑ DUE TO PROFIT OF FIRM & FIRM USES PROFIT TO ↑ A OR ↓ L & ↑ DE OVERALL.

- NW CAN ↑ DUE TO OWNER CONTRIBUTION

EITHER WORKS

(NEED JUST 1 OF THESE & DEFINITION OF STMTS)

### QUESTION 8

List the 5 Cs of credit. Are all the 5Cs applicable to the Dragons' Den scenarios we have viewed in class? Explain.

5

CAPACITY

CAPITAL

COLLATERAL

CONDITION

CHARACTER

- DRAGON DEN generally provides equity investment + ∴ collateral is not applicable.

- <sup>OR</sup> If Dragon Den provided a loan then all 5 C are applicable.

- Either is fine

**QUESTION 9**

- a) Assume Firm AA is selling a product for \$2 each. The variable cost associated with producing and selling the product is 60 cents. Assume that the fixed cost related to the product is \$1000. What is the breakeven point?

2

$$P = 2^{\$}$$

$$VC = .60$$

$$FC = 1000$$

$$BE Q = FC / P - VC = 1000 / 2 - .60$$

$$= \frac{715}{714} \text{ or } 714 \text{ UNITS}$$

- b) What is the breakeven price for Firm AA if the business believes that it can sell 500 units? Use the same fixed and variable cost from part a).

2

$$BE \text{ PRICE} = \frac{FC + VC(Q)}{Q} = \frac{100 + .60(500)}{500}$$

$$= \$2.60 / \text{UNIT}$$

OR USE PROFIT EQUATION LIKE EXAMPLES

$$TR = TC$$

- c) A second firm called Firm BB has decided to decrease their fixed cost and hire more labour that works on a per unit basis (e.g., Variable cost) and has a structure as follows: They are selling a product for \$2 each. The variable cost associated with producing and selling the product is 75 cents. Assume that the fixed cost related to the product is \$500. What is their breakeven point?

2

$$P = 2^{\$}$$

$$VC = .75$$

$$FC = 500$$

$$BE Q = FC / P - VC$$

$$= 500 / 1 - .75$$

$$= \underline{400 \text{ UNITS}}$$

- d) Calculate the operating leverage for Firm AA and Firm BB, given that they expect to increase their sales from 800 units to 1600 units in the next year. Use a price of \$2 for each firm. Fixed and variable costs for each firm can be obtained from parts a and c.

	AA		BB	
	800	1600	800	1600
TR	$2 \times 800$	$2 \times 1600$	$2 \times 800$	$2 \times 1600$
VC (total)	$.6 \times 800$	$.6 \times 1600$	$.75 \times 800$	$.75 \times 1600$
FC	1000	1000	500	500
EBIT	<u>1200</u>	<u>1240</u>	<u>500</u>	<u>1500</u>

OL $\frac{\% \Delta \text{ EBIT}}{\% \Delta \text{ SALES}} =$	$\frac{933}{100} = 9.3$	$\frac{200}{100} = 2.0$
BE	<u>714 UNITS</u>	<u>400 UNITS</u>

- e) Which of firms is better off regarding operating leverage and which of the firms is better off regarding breakeven units? Under what circumstances are they better off?

AA  $> OL$  so is better off at high  $\uparrow$  level  
of sales as EBIT  $\uparrow$  rapidly as sales  $\uparrow$  1.5

BB lower BE so is better off when sales low or  
 $\downarrow$  units is possible - lower risk (business risk)  
 1.5 better re OL + BE + 1.5 circumstance

- f) Aunt Gertrude (an owner in Firm AA) is demanding dividends of 2000 each year. How will this affect the breakeven point? Yes, I want a number!

Add dividend to FC

$$BE Q = \frac{FC}{P - VC}$$

$$= \frac{3000}{2 - .60}$$

$$= 2142 \text{ UNITS}$$

$$P = 2$$

$$VC = .60$$

$$FC = \underline{1000} + \underline{2000}$$