



Midterm Exam ADM2341 Managerial Accounting Fall 2013

150 minutes

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	√
	Check
Section	
A	✓
B	
C	

You may separate the pages but ensure that you put them back together and staple before handing in.

1. Please limit your answer to the space provided. Please indicate if you use the back of a page.
2. The use of standard abbreviations (O/H for Overhead and CM% for Contribution Margin Percentage) is quite acceptable.
3. Budget your time wisely.
4. Please do not ask the invigilators questions. Make reasonable assumptions where necessary.
5. Language dictionaries and calculators are allowed.
6. **You must show calculations.**

Questions	Max Grade
Q.1	18 /20
Q.2	12 /15
Q.3	20 /20
Q.4	15 /20
Total	65 /75

You must sign the following 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 headsets), 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 I pledge not to have committed or attempted to commit academic fraud in this examination.

Signed:

Note: an examination without this signed statement will not be graded and will receive an exam grade of zero.

QUESTION 1- Part 1- (12 points)

12 Fill in the missing data for each of the following independent cases. Write your answer to replace the (?).

	Case 1	Case 2	Case 3	Case 4
Sales \$? 125,000	Sales \$ 60,000	Sales \$? 120,000	Sales \$ \$110,000
TVC	50,000	TVC ? 40,000	TVC \$40,000	TVC \$22,000
CM	? 75,000	CM 20,000	CM \$80,000	CM ? 88,000
TFC	60,000	TFC ? 20,000	TFC ? 30,000	TFC ? 50,000
OI	? 15,000	OI ? 0	OI \$50,000	OI \$38,000
BEP \$	100,000	BEP \$ 60,000	BEP \$? 45,000	BEP \$? 62,500

$$\textcircled{1} \text{ BEP } (\$) = \frac{\text{TFC}}{\text{CM}\%}$$

$$100,000 = \frac{60,000}{\%}$$

$$\% = 0.6$$

$$\text{TVC} = 50,000 = 0.4 \times \text{Sales}$$

$$\text{Sales} = 125,000$$

$$\textcircled{2} \text{ TVC} = 60,000 - 40,000 = 20,000$$

$$60,000 = \frac{\text{TFC}}{1/3}$$

$$\text{TFC} = 20,000$$

$$\textcircled{3} \text{ BEP } \$ = \frac{30,000}{2/3}$$

$$= 45,000$$

$$\textcircled{4} \text{ BEP } \$ = \frac{50,000}{0.8}$$

$$= 62,500$$

QUESTION 1 – Part 2 – (8 points)

Choose the best answer for each of the following statement. Each answer worth **two** points each:

1. The accounting records of Wang Company revealed the following selected costs: sales commissions, \$25,000; plant supervision, \$88,600; and administrative expenses, \$179,400. Wang Company's period cost total:

a) \$25,000
 b) \$88,600
 c) \$179,400
 d) \$204,400

2. Conversion costs are:

a) Direct materials, direct labour, and manufacturing overhead
 b) Direct material and direct labour
 c) Direct labour and manufacturing overhead
 d) Period costs

3. Prime (primary) costs are comprised of:

a) Direct materials and manufacturing overhead
 b) Direct labour and manufacturing overhead
 c) Direct materials, direct labour, and manufacturing overhead
 d) Direct materials and direct labour

4. Smith company's budgeted production in units and budgeted direct materials purchases over the next three months are given below:

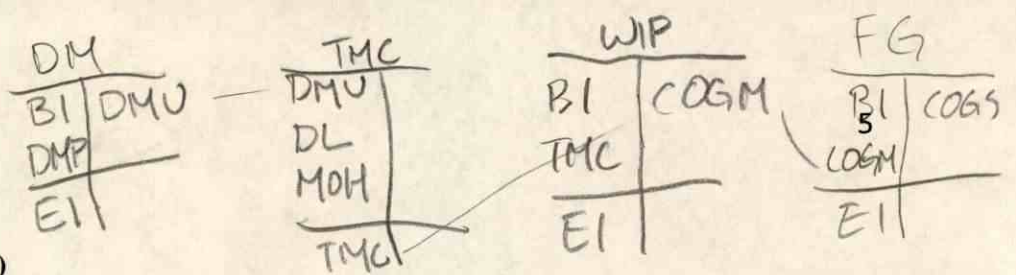
	January	February	March
Budgeted production (in units)	60,000	?	100,000
Budgeted direct materials purchases (in kilograms)	129,000	165,000	188,000

2kg DM = 1 product

Two kilograms of direct materials are required to produce one unit of product. The company wants direct materials on hand at the end of each month equal to 30 % of the following month's production needs. The company is expected to have 36,000 kilograms of direct materials on hand on January 1.

What should be the budgeted production for February?

a) 75,000 units
 b) 82,500 units
 c) 105,000 units
 d) 150,000 units



QUESTION 2 (15 POINTS)

The following information was extracted from September 2013 accounting records of Adm2341 Inc.:

Sales (\$158 per unit)		\$1,580,000	
Direct labour		To be determined	42000 + DMP - 175000
Direct materials used		\$175,000	
Building depreciation (see note 1)	75000	\$100,000	= 35000
Supplies-factory		\$150,000	
Other factory costs	>	\$300,000	DMP = 168000
Mortgage		\$100,000	
Advertising		\$164,000	
Other selling and administrative expenses		\$200,000	+25000 Dept
Work in Process inventory, beginning		\$46,000	
Finished goods inventory, beginning	4000 units	\$400,000	\$100/unit
Direct materials inventory, beginning		\$42,000	
Direct materials inventory, ending		\$35,000	
Work in Process inventory, ending		\$36,000	
Conversion costs		\$775,000	
Purchases Direct materials		To be determined	\$168000
Finished goods inventory, ending	2000 units	To be determined	

The following additional information is also relevant to September 2013 operations:

- 75 % of the company's building was devoted to production activities; the remaining is for sales and administration.
- The beginning and ending finished goods inventory consisted of 4,000 units and 2,000 units, respectively.

REQUIRED :

1. Determine the number of finished goods (Production) for the month of September (assume in units)

 2000 units X

2. Compute the Adm2341 Inc.'s total manufacturing overhead for the month of September.

Supplies - factory	150000
Other factory	300000
Depreciation (75%)	75000
MOH	525000 ✓

3. Compute the Adm2341 Inc. direct labour cost for the month of September

Conversion Cost	775000
Less: MOH	525000
Direct labor	250000 ✓

$$BI + COGM - COGS = EI$$

$$EI + COGS - BI = COGM$$

4. Prepare the Adm2341 Inc.'s schedule of cost of goods manufactured for September

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3.5 5. Prepare the Adm2341 Inc.'s income statement for September

Sales		1580000
COGS		1160000 ✓
BI FG	400000 ✓	
COGM	960000 ✓	
Less: EI FG	200000 ✗	
GM		420000 ✓
Less: Expenses		
Advertising	164000 ✓	
Depreciation	(25% × 100000) 25000 ✓	
Other SA Exp	200000 ✓	
Operating Income		310000 ✓

5.5 Q4

DM Used		175000 ✓
BI	42000	
+ Purchase	168000 ✓	
- EI	35000	
Direct labor		250000 ✓
MOH		525000 ✓
TMC		950000 ✓
+ BI WIP	46000	
- EI WIP	36000	
COGM		960000 ✓
+ BI FG	400000	
- EI FG	(100 × 2000) 200000	
COGS		1160000

QUESTION 3 (20 points)

Couscous Inc. sells two products, A and B. Current sales total 60,000 units consisting of 39,000 A units and 21,000 B units. Selling price and variable cost information follow:

	Product A	Product B	A	B
Sale price per unit	\$86	\$74	39,000	21,000
Total variable cost	\$65	\$41		

Sales people currently receive flat salaries that total \$400,000. There are no other fixed costs. Management is contemplating a change to a compensation plan that is based on commissions in an effort to boost the company's presence in the marketplace and increase its market share. Two plans are under consideration:

Plan A: 10% commission computed on total dollar sales. Product A sales are expected to be 45,500 units and B sales are anticipated to be 19,500 units.

Plan B: 30% commission computed on the basis of production contribution margin. Product A sales are anticipated to be 26,000 units and B sales are expected to total 39,000 units.

$$\text{Plan B: } \left. \begin{array}{l} 26000 \times 86 \\ 39000 \times 74 \end{array} \right\} \text{ sales}$$

REQUIRED:

1. Prepare Couscous Inc.'s Income Statement for the current year

Couscous Inc.	
Income Statement	
Current Year	
Sales	4908000
TVC	3396000
A	65×39000
B	41×21000
CM	1512000
TFC	400000
Income	1112000

2. Compute sales commissions under Plan A. In comparing with the flat salaries, will the sales force people likely be satisfied with the resulting impact of Plan A? Why?

A	\rightarrow	$45500 \times 86 = 3913000$
B	\rightarrow	$19500 \times 74 = 1443000$
Total	\rightarrow	$\$5356000 \times 10\% = 535600$

should be satisfied because it exceeds \$400,000 flat rate.

3. Compute sales commissions under Plan B. In comparing with the flat salaries, will the sales force people likely be satisfied with the resulting impact of Plan B? Why?

A	\rightarrow	$26000 \times 65 = 1690000$
B	\rightarrow	$39000 \times 41 = 1599000$
Total CM	\rightarrow	$5122000 - 3289000 = 1833000$
		$30\% \times 1833000 = 549900$

Should be satisfied because it exceeds \$400,000 flat rate.

We assume commissions in Plan A and B will replace the current salary, and that commissions under both plans will be ⁸fully variable. Being replaced, there will be no fixed cost.

4. Prepare Couscous Inc.'s income statement under Plan A.

Couscous Inc Income Statement For Current Year		
Sales		5356000
TVC		4292600
A	45500×65	
B	19500×41	
Commission	$10\% \times \text{sales}$	535600
CM		1063400
Income (no FC)		1063400 ✓

5. Will Couscous Inc. management likely be satisfied with the resulting impact of Plan A on company profitability compared to current year? Why?-----

No, because net income is less than the current year.

6. Prepare Couscous Inc.'s income statement under Plan B.

Couscous Inc Income Statement For current Year		
Sales		5122000
TVC		3289000
A	26000×65	
B	39000×41	
CM		1833000
TFC	$30\% \times \text{CM}$	549900
Income		1283100 ✓

7. Will Couscous Inc. management likely be satisfied with the resulting impact of Plan B on company profitability compared to current year? Why?-----

Yes, because the net income exceeds the current year.

8. Which plan do you recommend to Couscous Inc. management? Why?-----

Plan B, because by pushing sales, commission increase too, and will in turn decrease income. Evidently, Plan A yields less income than current year, Plan B therefore is better.

QUESTION 4 - (20 points)

Golfville Inc. is asking for help to prepare a monthly budget for the last two months (November and December) of 2013. The following information has been accumulated:

- Projected sales for October 2013 are \$400,000. The general manager of marketing believes that company's sales during November and December will increase by 10% each month over the previous month's sales. *∴ assume compound not simple.*
- Credit sales typically are 75 % of total sales. Credit experience indicates that 10 % of the credit sales are collected during the month of sale, and the remainder are collected during the following month.
- Golfville's cost of goods sold generally runs at 70 % of sales. This policy is in place for the last two years.
- All purchases are on credit, and 40 % of each month's purchases are paid during the month of purchase. The remainder is paid during the following month of purchase.
- The desired ending inventory is equal to 50 % of the next month's projected cost of goods sold. This policy is in place for the last two years.
- The estimated monthly expenses will be as follows:

Office salaries	\$58,000	
Property taxes	\$1,000	
Sales commissions	1 % of sales	
Depreciation	\$35,000	
- All operating expenses are paid in the month they are incurred, except property taxes which are paid semi-annually on December and June for the preceding six months.
- A new equipment will be purchased at a cost of \$125,000 in November. It will be paid \$25,000 cash and the remaining will be paid evenly in December and January.
- Dividends of \$50,000 will be paid in December.
- The company maintains a cash balance of at least \$25,000. The cash balance on October 31 is \$35,000.
- The company can borrow from its bank as needed at an interest rate of 8 % per annum. Borrowings must be in multiples of \$1,000. All borrowings take place at the beginning of a month, and all payments are made at the end of a month. Interest, if any, is paid at the end of each month.

REQUIRED:

- Explain the benefits that Golfville Inc. would gain from implementing a budgeting system.

4 It gives the manager a good idea of how much money will be received, disbursed, borrowed and repaid during the fiscal period. It helps in decision making process.

- Prepare the following budgets

- Prepare a sales budget for November and December 2013

	October	November	December
Total sales	\$400,000	440000	484000
Cash Sales	\$100,000	110000	121000
Credit sales	\$300,000	330000	363000

532400

- b. Prepare a schedule of budgeted cash collections from sales budget for November and December 2013.

	November	December
Cash sales	110000	121000
Sales on credit	33000	333300
Total collections	143000 X	454300 ✓

< 297000
36300

- c. Prepare a Merchandise Purchases budget for November and December 2013.

	October	November	December
Desired ending inventory	\$154,000	169400	186340
Cost of goods sold	280,000	308000	338800
Beginning inventory	140,000	154000	169400
Total purchases	\$294,000	323400 ✓	355740 ✓

372680

- d. Prepare a Purchase disbursements budget for November and December 2013.

	November	December
October Purchases	176400	
November Purchases	129360	194040
December Purchases		142296
Total disbursements	305760	336336

- e. Prepare an operating expenses budget for November and December 2013.

	November	December
Office salaries	58000	58000
Property taxes		1000 X
Commissions	4400	4840
Total before Depreciation	62400 ✓	63840 ✓
Depreciation	35000	35000

f. Prepare a cash budget for November and December 2013.

	November	December
Cash balance, beginning	35000	36506.67
Total cash collections	143000	454300
Total receipts	178000	490806.67
Less disbursements		
Purchases	305760	336336
Operating expenses	62400	62840 X
Equipment	25000	50000
Dividends		50000
Total disbursements	393160	499176
Excess (Deficit)	(215160)	(-260036) } + borrow Nov + Interest Nov
Interests <small>$250000 \times 8\% \times \frac{1}{12}$</small>	1666.67	2000 X
Borrowings (Repayments)	250000	300000 X
Cash balance, ending	36506.67	37964 ✓

