MIDTERM EXAM CRAM PACKAGE

Winter 2016

NOTE: These are only the questions. The answers can be found by looking at the original exam. All questions have the source written at the top of the question.

Chapter 2: COGM – Q2

The following information relates to Walnut Ltd. for the year ended December 31, 2013:

Sales	$3,500,000
Purchases:	
Direct materials	$700,000
Indirect materials	$50,000
Office supplies	$20,000
Salaries	$500,000 *
Direct labour	$800,000
Rent	$100,000 *
Utilities	$80,000 *
Advertising and promotional	$30,000

Inventories:	Dec. 31, 2012	Dec. 31, 2013
Direct materials	$45,000	$62,000
Indirect materials	-----	$ 9,000
Office supplies	$1,000	-----
Work-in-process	$4,100	$3,300
Finished goods	$90,000	$81,700

*Of these costs, 80 % are assigned to manufacturing activities and the remainder pertain to selling and administrative functions.

(Assume that there is no "over-or-under" applied overhead.)

Instructions:

(a) Prepare in good form a cost of goods manufactured schedule.
(b) Prepare an income statement through gross profit.
(c) How much were the prime costs in 2013?
(d) How much were the conversion costs in 2013?

Chapter 2: Cost Flow/T-Accounts – Fall 2012 Q1

Last night, the sprinkler system at Plant A was accidentally set off. The ensuing deluge destroyed most of the cost records in Plant A for the month just completed (May). The plant manager has come to you in a panic—he has to complete his report for head office by the end of today. He wants you to give him the numbers he needs for his report. He can provide you with some fragments of information he has been able to salvage:

Raw materials:	Beginning	$ 45,000
	Ending	25,000
Work in process:	Beginning	35,000
Cost of Finished goods:	sold in May	750,000
	Ending	75,000
Accrued wages payable:	Beginning	30,000
	Ending	10,000

Other information:

1. Total direct materials requisitions for the month were $230,000.
2. A total of 10,000 direct labour hours were worked during the month at an average wage of $25/hour.
3. Manufacturing overheads of $150,000 were incurred during the period.
4. On May 31, the ending inventory of work in process is $45,000.

Instructions
Calculate the following:
(a) The material purchased during May
(b) The amount paid to the labour force in May
(c) The cost of goods transferred from work in process inventory to finished goods inventory in May
(d) The cost of finished goods inventory at the beginning of May

Chapter 3: Job Order Costing – Fall 2014 Q2

Brandt Company produces unique metal sculptures. The company uses normal job order cost system and applies factory overhead to productions on the basis of direct labour dollars. The following balances were taken from the general ledger of the company as of January 1, 2013:

On January 1, 2013 there were three jobs in process with the following costs

	Job 35	Job 36	Job 37
Direct materials	$1,000	$3,400	$7,800
Direct labour	3,500	7,000	10,500
Applied overhead	4,200	8,400	12,600
Total	$8,700	$18,800	$30,900

- ✓ Raw materials inventory $2,300
- ✓ Finish goods inventory for job 34 $15,000

During January the following events occurred:

- ✓ Raw materials were purchased on account for $26,500
- ✓ Two more jobs were started: Job 38 and Job 39. Direct materials and direct labour costs incurred by each job in process in January are as follows:

	Direct materials	Direct labour
Job 35	$4,000	$3,000
Job 36	1,500	2,000
Job 37	2,600	1,500
Job 38	8,000	6,500
Job 39	7,600	7,000

- ✓ Jobs 37 and 38 were completed and sold by January 31.
- ✓ Job 35 was completed but not sold by January 31.

The company incurred the following actual factory overhead during the month:

Supervisory salaries	$8,750
Factory rent	$5,500
Depreciation (machines)	$3,500
Indirect materials	$1,250

The company writes off any under-or over- applied overhead to the Cost of Goods Sold in the month in which it is incurred.

Instructions:

a)Compute the ending balance of Raw Materials, Work in Process, and Finished Goods inventory on January 31.

b) Suppose that Brandt Company prices its jobs at cost plus 50%. In addition during January selling and administrative costs of $23,100 were incurred. Prepare an income statement and a Statement of COGS in proper format for the month of January

Chapter 3: Job Order Costing – Summer 2009 – Q2

Vargas Corporation's fiscal year ends on November 30. The following accounts are found in its job-order cost accounting system for the first month of the new fiscal year:

Raw Materials Inventory

Dec. 1	Beginning balance	(a)	Dec. 31	Requisitions	16,850
31	Purchases	19,225			
Dec. 31	Ending balance	7,975			

Work in Process Inventory

Dec. 1	Beginning balance	(b)	Dec. 31	Jobs completed	(e)
31	Direct materials	(c)			
31	Direct labour	8,800			
31	Overhead	(d)			
Dec. 31	Ending balance	(f)			

Finished Goods Inventory

Dec. 1	Beginning balance	(g)	Dec. 31	Cost of goods sold	(i)
31	Completed jobs	(h)			
Dec. 31	Ending balance	(j)			

Factory Labour

Dec. 31	Factory wages	12,025	Dec. 31	Wages assigned	(k)

Manufacturing Overhead

Dec. 31	Indirect materials	1,900	Dec. 31	Overhead applied	(m)
31	Indirect labour	(l)			
31	Other overhead	1,245			

Other data:

1. On December 1, two jobs were in process: Job No. 154 and Job No. 155. These jobs had combined direct materials costs of $9,750 and direct labour costs of $15,000. Overhead was applied at a rate that was 75% of the direct labour cost.
2. During December, Job Nos. 156, 157, and 158 were started. On December 31, Job No. 158 was unfinished. This job had charges for direct materials of $3,800 and direct labour of $4,800, plus manufacturing overhead. All jobs except Job No. 158 were completed in December.
3. On December 1, Job No. 153 was in the finished goods warehouse. It had a total cost of $5,000. On December 31, Job No. 157 was the only job finished that was not sold. It had a cost of $4,000.
4. Manufacturing overhead was $230 overapplied in December.

Instructions

List the letters (a) through (m) and indicate the amount for each letter. Show all calculations.

Chapter 4: Process Costing - Fall 2014 – Q3

The Chang Manufacturing Company makes wood-finishing stain and uses the FIFO method of process costing for its stain manufacturing activity. The production of stain begins with the blending of various chemicals and ends with the canning of the stain. Canning occurs when the mixture reaches the 90% stage of completion. After canning, the cans are transferred to the shipping department. Here the cans are crated and shipped to various customers. Conversion costs are added uniformly throughout the process. The following are the actual production data for the canning department for April:

April Production Costs

Work in Process, April 1:	
Direct materials- chemicals	$ 72,000
Direct labour	18,000
Applied overhead	5,000
Costs added in April:	
Direct materials-chemicals	$336,000
Direct materials- cans	10,000
Direct labour	425,500
Applied overhead	115,000

Units for April:	
Work in process inventory, April 1 (25% complete)	8,000 litres
Transferred to shipping department during April	40,000 litres
Started during April	42,000 litres
Work in process inventory, April 30 (80% complete)	10,000 litres

Instructions:

a) Compute the cost per equivalent unit of production during the previous month for each of material-chemicals, and conversion costs;

b) Compute the equivalent units in April for each of materials-cans, material-chemicals and conversion costs;

c) Compute the ending work in process inventory for April;

d) Compute the cost per equivalent unit of production of the units started and completed this period for each of materials-cans, material-chemicals, and conversion costs;

e) Compute the cost per equivalent unit of production of the units started last period and completed this period for each of materials-cans, material-chemicals, and conversion costs;

Chapter 4: Process Costing – Winter 2009 – Q3

S&R Inc manufactures the nutrient fit-for-life through two manufacturing processes: blending and packaging. All materials are entered at the beginning of each process. On August 1, 2008, inventories consisted of Raw Materials $5,000; Work in Process—Blending $0; Work in Process—Packaging total $8,000 which is $5,000 for transferred in cost from blending Department, $1,000 for material costs and $2,000 for conversion costs; and Finished Goods $7,500. The beginning inventory Work in Process—Packaging consisted of 500 units, 40% complete as to conversion costs. During August, 9,000 units were started into production in blending, and 8,200 units transferred from blending to packaging at a cost of $82,000. The units transferred from packaging to finished goods were 8,600 units. The ending inventory Work in Process-Packaging was 50% completed as to conversion costs.

In addition the following transactions were completed:

1. Purchased $75,000 of raw materials.

2. Issued direct raw materials for production: $16,800 for blending and $16,400 for packaging.

3. Incurred factory labour costs of $22,770.

4. Used direct labour: $12,230 for blending and $8,950 for packaging.

5. Incurred $41,300 of manufacturing overhead, including factory amortization of $10,000 and the rest paid in cash and on account.

6. Applied manufacturing overhead at the rate of $50 per machine hour. Machine hours were 900 hours for blending and 300 hours for packaging.

Instructions

Answer the following questions for Packaging Process that is using Weighted –Average method.

1. Prepare a schedule of equivalent units for the August activity
2. Determine the unit cost of items transferred to finished goods.
3. Determine the total costs of all units transferred to finished goods
4. Determine the total costs assigned to ending inventory

Chapter 5: ABC – Winter 2014 – Q5

YTM International Corporation has two main product lines— composite kayaks, which are handmade and very labour-intensive, and rotomolded kayaks, which require less labour but employ more expensive equipment. YTM Internationals' controller, Diane Buswell, is now evaluating several different methods of assigning overhead to these products. It is important to ensure that costs are appropriately assigned to the company's products. At the same time, the system that is used must not be so complex that its costs are greater than its benefits. Diane has decided to use the following activities and costs to evaluate the methods of assigning overhead.

Activity	Cost
Designing new models	$121,100
Creating and testing prototypes	152,000
Creating molds for kayaks	188,500
Operating oven for the rotomolded kayaks	40,000
Operating the vacuum line for the composite kayaks	28,000
Supervising production employees	180,000
Curing time (the time that is needed for the chemical processes to finish before the next step in the production process; many of these costs are related to the space required in the building)	190,400
Total	$900,000

As Diane examines the data, she decides that the cost of operating the oven for the rotomolded kayaks and the cost of operating the vacuum line for the composite kayaks can be directly assigned to each of these product lines and do not need to be allocated with the other costs.

Instructions:
For purposes of this analysis, assume that YTM uses $234,000 in direct labour costs to produce 1,000 composite kayaks and $286,000 in direct labour costs to produce 4,000 rotomolded kayaks each year.

a) Use direct labour dollars as an allocation basis; determine the amount of overhead that should be assigned to each unit of each product line using this method.

b) Activity-based costing requires a cost driver for each cost pool. Use the following information to assign the costs to the product lines using the activity-based costing approach.

Activity	Cost Driver	Driver Amount for Composite	Driver Amount for Rotomolded
Designing new models	Number of models	3	1
Creating and testing prototypes	Number of prototypes	6	2
Creating molds for kayaks	Number of molds	12	1
Supervising production employees	Number of employees	12	12
Curing time	Number of days of curing time	15,000	2,000

What amount of overhead should be assigned to each composite kayak and each rotomolded kayak using this method? Which of the two methods do you think YTM International should use? Why?

Chapter 5: ABC – Fall 2014 – Q4

The Canadian Motorcycle Company (CMC) produces two models of motorcycles: Faster and Slower. The company has five categories of overhead costs: purchasing, receiving, machine operating costs, handling, and shipping. Each category represents the following percentages of total overhead costs, which amount to $4 million:

Purchasing	25.0%	Handling	10.0%
Receiving	12.5%	Shipping	15.0%
Machine operating	37.5%		

Current capacity is 200,000 machine hours, and the current production uses 100% of the available hours. The sales mix is 45% Faster and 55% Slower. The overhead costs are applied to each model based on machine hours.
The production costs for each model of motorcycle and other relevant information are as follows:

	Faster	Slower
Direct materials per unit	$8,000	$6,500
Direct labour per unit	$1,750	$1,850
Applied overhead	?	?
Number of units produced	400	500
Number of purchases	5	4
Number of shipments received	3	3
Percentage of machine hours consumed by each product	50%	50%
Number of moves in handling	75	100
Number of kilometres to ship to customers	4,000	4,250

Instructions

(a) CMC determines its prices by adding 40% to the cost of direct materials and direct labour. Determine if this pricing policy is appropriate. Show all calculations to support your answer.

(b) Use an activity-based approach to determine whether CMC can make a profit if it sells the Faster model for $15,000. Show all supporting calculations. (Round all answers to the nearest dollar.)

Chapter 6: CVP – Fall 2014 – Q5

Kirkland Corporation sells a single product for $40. Its management estimates the costs of manufacturing and selling its product per unit at the company's average normal capacity of 1,000 units per month as follows:

Direct materials	$12.00
Direct labour	$7.20
Manufacturing overhead—variable	$3.20
Manufacturing overhead—fixed	$3.20
Selling expenses—variable	$1.80
Selling expenses—fixed	$2.40
Administrative expenses—variable	$0.80
Administrative expenses—fixed	$1.60

Instructions

(a) Assuming fixed costs and net sales are spread evenly throughout the year; calculate Kirkland's annual break-even point in (1) units and (2) dollars.
(b) Assuming Kirkland Corporation increases its selling price by 30% and all other factors (including demand) remain constant, determine by what percentage annual profits will increase.
(c) Assume the price remains at $40 per unit and variable costs remain the same per unit, but fixed costs increase by 30% annually. Calculate the percentage increase in unit sales required to achieve the same level of annual profit at the current annual sales.
(d) Determine the sales dollars required to earn an annual operating income of $72,000 before tax. Kirkland Corporation's income tax is 40%.

Chapter 6: CVP – Summer 2009 – Q5A & Q5B

Part A

Dias Manufacturing had a bad year in 2005. For the first time in its history, it operated at a loss. The company's income statement showed the following results from selling 80,000 units of product: net sales $1.6 million; total costs and expenses $1.74 million; and net loss $140,000. Costs and expenses consisted of the following:

	Total	Variable	Fixed
Cost of goods sold	$1,200,000	$780,000	$420,000
Selling expenses	420,000	75,000	345,000
Administrative expenses	120,000	45,000	75,000
	$1,740,000	$900,000	$840,000

Management is considering the following independent alternatives for 2006:

1. Increase the unit selling price by 25% with no change in costs and expenses.
2. Change the compensation of salespersons from fixed annual salaries totalling $200,000 to total salaries of $40,000 plus a 5% commission on net sales.
3. Purchase new high-tech factory machinery that will change the proportion between variable and fixed costs of goods sold to 50:50.

Instructions

(a) Calculate the break-even point in dollars for 2005. **3 Marks**

(b) Calculate the break-even point in dollars under each of the alternative courses of action. **12 Marks (4 marks for each alternative)**

(c) Which course of action do you recommend? Explain. **3 Marks**

PART B

Grass King manufactures lawn mowers, weed-trimmers, and chainsaws. Its sales mix and contribution margin per unit are as follows:

	Sales Mix	Contribution Margin per Unit
Lawn mowers	30%	$30
Weed-trimmers	50%	$20
Chainsaws	20%	$40

Grass King has fixed costs of $4.86 million.

Instructions

Calculate the number of units of each product that Grass King must sell in order to earn $540,000 before tax under this product mix. Grass King's tax rate is 40%.

Chapter 6: CVP – Fall 2007 – Q3

Popcorn, Inc. currently sells plain popcorn at the ballpark. During a typical month the stand reports a profit of $18,000 with sales of $100,000 and fixed costs of $42,000 and variable costs of $0.64 per box.
Next year the company plans to start selling candy-coated popcorn for $3 a box. The candy-coated popcorn will have a variable cost of $0.72. The new equipment and personnel to handle the popcorn will increase monthly fixed costs by $17,616. Initial sales of candy-coated popcorn should total 10,000 boxes. However, most of the candy-coated popcorn sales are anticipated to come from current plain popcorn purchasers. Consequently, monthly sales of plain popcorn will decline to $40,000.
After the first year of candy-coated popcorn sales, the company president believes that it will increase to 15,000 boxes a month and that plain popcorn sales will increase to $225,000 a month.

Required:

a. Determine the monthly breakeven sales in dollars before adding the candy-coated popcorn product.

b. Determine the monthly breakeven sales during the first year of candy-coated popcorn sales assuming a constant sales mix of **$160** plain popcorn to **$600** candy-coated popcorn.