COMM 305 MOCK EXAM ---

SELECTION OF TOUGH PROBLEMS FROM PREVIOUS MIDTERMS

CHAPTER 2 –

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

Vargas Corporation's fiscal year ends on June 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

July 1	Beginning balance	15,000	July 31 Requisitions	(a)
31	Purchases	290,000		
July 31	Ending balance	(b)		

Work in Process Inventory

July 1	Beginning balance	(c)	July 31 Jobs completed	(f)
31	Direct materials	175,000		
31	Direct labour	(d)		
31	Overhead	(e)		
July 31	Ending balance	(g)		

Finished Goods Inventory

July 1	Beginning balance	(h)	July 31 Cost of goods sold	(j)
31	Completed jobs	(i)		
July 31	Ending balance	(k)		

Factory Labour

July 31	Factory wages	(l)	July 31 Wages assigned	(m)

Manufacturing Overhead

July 31	Indirect materials	27,000	July 31 Overhead applied	114,000
31	Indirect labour	23,000		
31	Other overhead	(n)		

Other data:

1. On July 1, two jobs were in process: Job No. 4085 and Job No. 4086, with costs of $57,000 and $23,000, respectively.
2. During July, Job Nos. 4087, 4088, and 4089 were started. On July 31, only Job No. 4089 was unfinished. This job had charges for direct materials of $20,000 and direct labour of $15,000.
3. On July 1, Job No. 4084, costing $245,000, was in the finished goods warehouse. On July 31, Job No. 4088, costing $150,000, was in finished goods.
4. Overhead was $3,000 over-applied in July.
5. Manufacturing overhead was applied at the rate of 80% of direct labour cost.

Instructions

List the letters (a) through (n) and indicate the amount pertaining to each letter. Show calculations.

CHAPTER 4 – PROCESS COSTING - slightly modified from original exam

General Fabricator assembles its product in several departments. It has two departments that process all units. During October the beginning work-in-process in the Cutting department was half completed as to conversion and completed as to direct materials. The beginning inventory included $12,000 for materials and $3,000 for conversion costs. Ending work-in-process inventory in the Cutting department was 40 percent complete. In the Cutting department direct materials are added at the beginning of the process and conversion costs are incurred evenly during the process. General Fabricator uses the FIFO method to calculate equivalent units in the Cutting department.
Beginning work-in-process in the Finishing department was 75 percent complete as to conversion. In the Finishing department direct materials are added at the end of the process and conversion costs are incurred evenly during the process.
Beginning inventories included $16,000 for transferred-in costs and $20,000 for conversion costs. Ending inventory was 25 percent complete. General Fabricator uses the Weighted Average method to calculate equivalent units in the Finishing department

Additional information about the two departments follows:

	Cutting	Finishing
Beginning work-in-process units	20,000	20,000
Units started this period	40,000	
Units transferred this period	50,000	50,000
Ending work-in-process units		20,000
Material costs added	$48,000	$28,000
Direct manufacturing labour	$16,000	$40,000
Factory overhead costs	$8,000	$24,000

Required:

Prepare the equivalent units of production and the production cost report for the Finishing department for the month of October. (Hint using the appropriate method to calculate first the costs of units transferred from Cutting Department to Finishing Department).

CHAPTER 5 – ACTIVITY BASED COSTING

Stellar Stairs Co. designs and builds factory-made premium wooden stairs for homes. The manufactured stair components (spindles, risers, hangers, hand rails) permit installation of stairs of varying lengths and widths. All are made of white oak wood. The company's budgeted manufacturing overhead costs for 2012 are as follows:

Overhead Cost Pools	Amount
Purchasing	$ 60,000
Handling materials	80,000
Production (cutting, milling, finishing)	250,000
Setting up machines	70,000
Inspecting	90,000
Total budget overhead costs	$550,000

For the last four years, Stellar Stairs Co. has been charging overhead to products on the basis of direct labour hours. For 2012, it has budgeted 250,000 direct labour hours.

The owner-manager of Stellar Stairs Co. recently directed the accountant to implement the activity-based costing system that has been proposed. The accountant and the production foreperson identify the following cost drivers and their usage for the previously budgeted overhead cost pools.

Activity Cost Pools	Cost Drivers	Expected Use of Cost Drivers
Purchasing	Number of orders	600
Handling materials	Number of moves	16,000
Production (cutting)	Direct labour hours	100,000
Setting up machines	Number of set-ups	350
Inspecting	Number of inspections	6,000

The sales manager has received an order for 280 stairs from Community Builders, Inc., a large housing development contractor. The accountant prepares cost estimates for producing components for 280 stairways so the sales manager can submit a contract price per stair to Community Builders. The Accountant accumulates the following data for the production of 280 stairways:

Direct materials	$158,250
Direct labour	112,000
Machine hours	5,000
Direct labour hours	14,500
Number of purchase orders	60
Number of material moves	800
Number of machine set-ups	50
Number of inspections	450

Instructions

(a) Calculate the predetermined overhead rate using traditional costing with direct labour hours as the basis
(b) What is the manufacturing cost per stairway under traditional costing? (Round to the nearest cent)
(c) What is the manufacturing cost per stairway under the proposed activity-based costing? (Round to the nearest cent) Prepare all of the necessary schedules.)

(d) Which of the two costing systems is preferable in pricing decisions and why?

CHAPTER 6 – CVP ANALYSIS

PART 1

Toronto Company is contemplating a major change in its cost structure. Currently, all of its drafting work is performed by skilled drafts-persons. Alfredo Ayala, Toronto's owner, is considering replacing the drafts-persons with a computerized drafting system. However, before making the change, Alfredo would like to know its consequences, since the volume of business varies significantly from year to year. Shown below are CVP income statements for each alternative:

	Manual System	**Computerized System**
Sales	$5,000,000	$5,000,000
Variable costs	$2,600,000	1,800,000
Contribution margin	2,400,000	3,200,000
Fixed costs	1,200,000	2,000,000
Operating income	$ 1,200,000	$ 1,200,000

Instructions

(a) Determine the degree of operating leverage for each alternative.

(b) Which alternative would produce the higher operating income if sales increased by $500,000 and calculate by how much operating income will increase?

(c) Using the margin of safety ratio determines which alternative could sustain the greater decline in sales before operating at a loss.

PART 2

Vice President for Sales and Marketing Sam Totter is trying to plan for the coming year in terms of production needs to meet the sales demand. He is also trying to determine ways in which the company's profits might be increased in the coming year.

Waterways Inc. markets a simple water control and timer that it mass-produces. During 2008, the company sold 696,000 units at an average selling price of $4.22 per unit. The variable expenses were $2,053,200, and the fixed expenses were $683,338.

Instructions

(1) What is the product's contribution margin ratio?

(2) What is the company's break-even point in units and in dollars for this product?

(3) What is the margin of safety, both in dollars and as a ratio?

(4) If management wanted to increase its income from this product by 10%, how many additional units would have to be sold to reach this income level?

(5) If sales increase by 71,090 units and the cost behaviours do not change, how much will income increase on this product?

PART 3

Waterways Inc. has a sales mix of sprinklers, valves, and controllers as follows.

Annual expected sales:

Sale of sprinklers 450,000 units at $26.50

Sale of valves 1,500,000 units at $11.20

Sale of controllers 50,000 units at $42.50

Variable manufacturing cost per unit:

Sprinklers $13.96

Valves $7.95

Controllers $29.75

Fixed manufacturing overhead cost (total) $760,000

Variable selling and administrative expenses per unit:

Sprinklers $1.30

Valves $0.50

Controllers $3.41

Fixed selling and administrative expenses (total) $1,600,000

Instructions

Assuming the sales mix remains the same, Calculate the number of units of each product that Waterways Inc. must sell in order to break even under this product mix.