

Week #10 – Chapter 7 Homework Assignment**Problem 1 (Textbook Reference: P7-1) – Determine budgeted cost of goods sold; prepare operating budgets**

Joyce Corporation prepares monthly operating and financial budgets. The operating budgets for June and July are based on the following data:

	<u>Units Produced</u>	<u>Units Sold</u>
June	400,000	360,000
July	360,000	400,000

All sales are \$30 per unit. Direct materials, direct labor, and variable manufacturing overhead are estimated at \$3, \$6, and \$3 per unit, respectively. Total fixed manufacturing overhead is budgeted at \$1,080,000 per month. Selling and administrative expenses are budgeted at \$1,200,000 plus 10% of sales, while federal income taxes are budgeted at 40% of income before federal income taxes. The inventory at June 1 consists of 200,000 units with a cost of \$17.10 each.

Required:

- Prepare monthly budget estimates of cost of goods sold assuming that FIFO inventory procedure is used.
- Prepare planned operating budgets for June and July.

*****Templates have been provided on the next page*****

Problem 1 Answer Sheet – Requirement A

	June	July
Planned production in units		
Planned production costs:		
Direct materials		
Direct labor		
Variable manufacturing overhead		
Fixed manufacturing overhead		
Total planned production costs		
Add: beginning inventory cost		
June 1		N/A
July 1	N/A	
Cost of goods available for sale		
Less: ending inventory cost		
June 30		N/A
July 31	N/A	
Cost of goods sold		

Calculation of Unit Product Cost:	June	July
Planned production cost		
Planned production units		
Unit product cost		

Problem 1 Answer Sheet – Requirement B

	June	July
Sales revenue		
Less: cost of goods sold		
Gross margin		
Less: Selling & administrative expenses		
Variable		
Fixed		
Operating Income		
Less: Income tax expense		
Net Income		

Problem 2 (Textbook Reference: P7-2) – Prepare a planned operating budget and a flexible operating budget

The computation of operating income for Frisco Company for 2013 follows:

FRISCO COMPANY
Income Statement
For the Year 2013

Sales	\$ 1,800,000
Cost of goods sold:	
Direct materials	\$ 360,000
Direct labor	\$ 240,000
Variable overhead	\$ 120,000
Fixed overhead	\$ 240,000
Total cost of goods sold	<u>\$ 960,000</u>
Gross margin	<u>\$ 840,000</u>
Operating expenses:	
Variable selling	\$ 132,000
Fixed selling	\$ 168,000
Variable administrative	\$ 156,000
Fixed administrative	\$ 192,000
Total operating expenses	<u>\$ 648,000</u>
Net operating income	<u>\$ 192,000</u>

An operating budget is prepared for 2014 with sales forecasted at a 25% increase in volume. Direct materials, direct labor, and all costs labeled as variable are completely variable. Fixed costs are expected to continue except for a \$24,000 increase in fixed administrative costs. Actual operating data for 2014 are:

Sales	\$ 2,160,000
Direct materials	\$ 444,000
Direct labor	\$ 288,000
Variable manufacturing overhead	\$ 148,800
Fixed manufacturing overhead	\$ 246,000
Variable selling expenses	\$ 186,000
Fixed selling expenses	\$ 157,200
Variable administrative expenses	\$ 198,000
Fixed administrative expenses	\$ 218,200

Required:

- Prepare a budget report comparing the 2014 planned operating budget with actual 2014 data.
- Prepare a budget report that would be useful in appraising the performance of the various persons charged with responsibility to provide satisfactory income. (Hint: Prepare budget data on a flexible basis and use the percentage by which sales were actually experienced.)

*****Templates for parts (a) and (b) have been provided on the next pages*****

Problem 2 Answer Sheet – Requirement A

FRISCO COMPANY
Comparison of Actual and Planned Operating Budget
For the Year 2014

	Planned Operating Budget*	Actual	Actual Over (Under)
Sales	_____	_____	_____
Cost of goods sold:			
Direct materials			
Direct labor			
Variable overhead			
Fixed overhead	_____	_____	_____
Total cost of goods sold	_____	_____	_____
Gross margin	=====	=====	=====
Operating expenses:			
Variable selling			
Fixed selling			
Variable administrative			
Fixed administrative	_____	_____	_____
Total operating expenses	_____	_____	_____
Net operating income	=====	=====	=====

**All variable expenses in the planned budget should increase by 25% over last year.*

Problem 2 Answer Sheet – Requirement B

FRISCO COMPANY
Comparison of Actual and Flexible Operating Budget
For the Year 2014

	Flexible Operating Budget**	Actual	Actual Over (Under)
Sales	_____	_____	_____
Cost of goods sold:			
Direct materials			
Direct labor			
Variable overhead			
Fixed overhead	_____	_____	_____
Total cost of goods sold	_____	_____	_____
Gross margin	=====	=====	=====
Operating expenses:			
Variable selling			
Fixed selling			
Variable administrative			
Fixed administrative	_____	_____	_____
Total operating expenses	_____	_____	_____
Net operating income	=====	=====	=====

***Based on 2,160,000 units, or 96% of the planned operating level. All budget amounts for variable costs should be computed using the actual 2014 sales volume. Each variable cost in the planned budget should be multiplied by 96% for the flexible budget. This is the level of costs for which a supervisor or executive can be held responsible. We assume that the number of units produced equals the number of units sold.*

Problem 3 (Supplemental Problem #1) – Prepare various budgets

Galaxy Lighting Company manufactures and sells lighting fixtures. Estimated sales for the next three months are:

Budgeted sales:

September	\$	400,000
October	\$	350,000
November	\$	500,000
December	\$	400,000
January	\$	600,000

Production budget information:

The company maintains an end-of-month inventory of 1,000 units plus 10% of next month's unit expected sales. Each unit sells for \$50. The company expects to sell 12,000 units in January of the following year.

Materials purchases budget information:

Five units of material are required for each unit of finished goods produced. Galaxy wants to have materials on hand at the end of each month equal to 15 percent of the following month's production needs. The materials inventory on September 30 is 8,000 units of material. January production is budgeted for 15,000 units.

Cash payments for materials purchases information:

The purchase cost per unit of material is \$2. Generally, 30% of materials purchases are due and payable in the month of purchase with the remainder due the following month. September purchases paid for in October are expected to equal \$48,225.

Required:

- Prepare a production budget for the fourth quarter of the year.
- Prepare a materials purchases budget for the fourth quarter of the year.
- Prepare a cash payments for materials purchases budget for the fourth quarter of the year. What is Galaxy Lighting's accounts payable balance at December 31?

*****Templates have been provided on the next page*****

Problem 3 Answer Sheet

Production Budget

	October	November	December	Total
Budgeted product sales in units				
+ Desired product units in ending inventory				
= Total product units needed				
- Product units in beginning inventory				
= Product units to produce				

Material Purchases Budget

	October	November	December	Total
Product units to produce				
x Units of material needed per unit produced				
= Material needed for units to produce				
+ Desired units of material in ending inventory				
= Total units of material needed				
- Units of material in beginning inventory				
= Units of material to purchase				

Cash Payments for Material Purchases

	October	November	December
Material purchases (units)			
x Material cost per unit			
= Total cost of purchase			
Payables from September			
October purchases			
November purchases			
December purchases			
Total payments in month			

What is Galaxy Lighting's accounts payable balance at December 31? _____