Examination: 11066 „Management Accounting" **Summer Term 2012**

Examiner: Prof. Dr. Barbara Schöndube-Pirchegger

Examination questions: 3

The following aids can be used: a calculator in accordance with the instructions given by the Board of Examiners and a dictionary.

Hint: A maximum of 60 points can be reached from solving the 3 problems below.

Problem 1 (20 points):

Fancy Fruit Alliance (F-F-A) produces two brands of smoothies: "Fruit Fusion" and "Berry Blast". The smoothies are produced from only two ingredients: bananas and berries. "Fruit Fusion" is 75% banana by weight and 25% berries, whereas "Berry Blast" is 40% banana and 60% berries. There is negligible loss while producing the smoothies.

Packages of either brand contain 1 litre equal to 1 kilogram. F-F-A's master budget projects sales of 250,000 packages of each brand in 2012, at $4.5 per package of Fruit Fusion and $6 per package of Berry Blast. Forecasted 2012 ingredients costs are $2 per kilogram of bananas and $5 per kilogram of berries. A total of 10,000 direct manufacturing labor hours - 30% for Fruit Fusion and 70% for Berry Blast - are budgeted, at 15$ per hour. Manufacturing overhead costs are expected to be $360,000, allocated between the two products on the basis of packages produced. There is no beginning or ending inventory.

1) Calculate budgeted gross margins for each product and for F-F-A in 2012.

2) By working with its current suppliers, F-F-A estimates it could reduce the costs of ingredients by 3%. Calculate F-F-A's revised gross margin in 2012.

3) An analysis of all activities by a cross-functional team responsible for continuous improvement shows that if the company purchases better-quality ingredients (e.g. bigger fruits and seedless berries) from a different supplier costing 4% more than the original ingredients, there will be fewer quality related production line stoppages, which will reduce manufacturing overhead costs by 16% and direct manufacturing labor hours by 14%. Calculate F-F-A's revised gross margin under this scenario.

4) Based on budgeted gross margin alone which of the scenarios 1) – 3) would the management prefer?

Problem 2 (30 points):

The Sampleton Manufacturing Company's costing system has two direct-cost categories: direct materials and direct manufacturing labor. Manufacturing overhead (both variable and fixed) is allocated to products on the basis of standard direct manufacturing labor-hours (DLH). At the beginning of 2012, Sampleton adopted the following standards for its manufacturing costs:

	Cost per	
	input	**output unit**
Direct materials	4 pounds at $7 per pound	$ 28.00
Direct manufacturing labor	3 hrs. at $17 per hr.	$ 51.00
Manufacturing overhead:		
Variable	$8 per DLH	$ 24.00
Fixed	$5 per DLH	$ 15.00
Standard manufacturing cost per output unit		$118.00

Sampleton's budgeted fixed manufacturing overhead for January 2012 was based on 45,000 direct manufacturing labor-hours. The records for January indicated the following:

Direct materials used	25,100 pounds at $6.35 per pound
Direct manufacturing labor	34,200 hrs. at $18.75 per hr.
Total actual manufacturing overhead (variable and fixed)	$500,000
Actual production	9,800 output units

Required:

1) Prepare a schedule of total standard manufacturing costs for the 9,800 output units in Jan. 2012.

2) For the month of January 2012, compute the following variances, indicating whether each is favorable (F) or unfavorable (U):

a. Direct materials price variance

b. Direct materials efficiency variance

c. Direct manufacturing labor price variance

d. Direct manufacturing labor efficiency variance

e. Variable manufacturing overhead efficiency variance

f. Production-volume variance

g. Total manufacturing overhead spending variance

Problem 3: (10 Points):

1) When 10,000 units are produced the fixed cost is $15 per unit. What are the fixed costs per unit, when 100,000 units are produced?

Fixed Costs per unit = ____________

2) DaSilva Manufacturing provided the following information for last month.

Sales	$150,000
Variable costs	65,000
Fixed costs	45,000
Operating income	$40,000

If sales double next month, what is the projected operating income?

Projected Operating Income = ____________

3) UltraPro Manufacturing currently produces 1,000 units per month. The following per unit data apply:

Direct materials	$60
Direct manufacturing labor	10
Variable manufacturing overhead	17
Fixed manufacturing overhead	11
Total manufacturing costs	$98

The plant has capacity for 3,000 units and is considering expanding production to 2,000 units. What is the per unit cost of producing 2,000 units?

Per unit cost = ____________

4) Pederson Company reported the following:

Manufacturing costs	$2,000,000
Units manufactured	50,000
Units sold	47,000 units sold for $75 per unit

What is the amount of gross margin?

Amount of gross margin = ____________