

Name

ID No

PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Examination : semester 1

Academic Year : 2009

Date September 29, 2009

Time :13.30-16.30

Subject : 225-455 Cost Analysis

Room: Robot building

Instruction

1. Attempt all questions.
2. Write answers in this examination paper.
3. All materials are allowed to the examination room.
4. Total examination papers are 9 pages.
5. The points are as follows ;

Question No	1	2	3	4	Total
Full points scored	14	20	10	16	60
Scored					

ทฤษฎีในการสอบ โทษขั้นต่ำ คือ ปรับตกในรายวิชาที่ทุจริต
และพักการเรียน 1 ภาคการศึกษา

Boonrueing Manasurakarn



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1. XYZ Household Products, Inc., manufactures a number of consumer items for general household use. One of these products, a chopping board, requires an expensive hardwood. During a recent month, the company manufactured 4,000 chopping board using 11,000 board feet of hardwood. The hardwood cost the company \$ 18,700.

The company's standard for one chopping board are 2.5 board feet of hardboard.

The direct materials, direct labor and manufacturing overhead standards for one chopping board are given below :

Purchase price, per board foot.....	\$ 1.50
Freight from supplier's warehouse.....	0.30
Receiving and handling.....	0.20
Less purchase discount.....	0.20

Material requirements as specified in the bill of materials For a chopping board, in foot.....	2.80
All allowances.....	0.40

Basic wage rate per hour.....	\$ 8.00
Fringe benefits at 20% of basic rate.....	1.60

Basic labor time per one chopping board, in hours...	1.60
All allowances.....	0.80

The predetermined overhead rate is \$ 2.00 per direct labor-hour.

Required :

1. Standard cost of material per one chopping board.
2. Standard labor cost per one chopping board.
3. Standard manufacturing overhead cost per one chopping board.

(14 points)



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2. AAA, Inc., manufactures a product. The company uses a standard cost system and has established the following standards for one unit.

	Standard Quantity	standard price or rate
Direct material	\$ 4.50 pounds	\$ 6.00
Direct labor	0.60 hour	\$ 12.00
Manufacturing overhead	0.60 hour	

During September, the company recorded this activity relative to production of product :

- The company produced 3,000 units during September.
- A total of 8,000 pounds of material were purchased at a cost of \$ 46,000
- There was no beginning inventory of materials on hand to start the month : at the end of the month, 2,000 pounds of material remained in the warehouse unused.
- The company employs 10 persons to work on the production on product. During September, each worked an average of 160 hours at an average rate of \$ 12.50 per hour.
- Variable manufacturing overhead is assigned to product on the basis of direct labor-hours. Variable manufacturing overhead cost during September totaled \$ 3,600.

Required:

- The materials variances.
- The labor variances.
- The Manufacturing overhead variances.
- Analyse the causes of the variances.

(20 points)



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3. A company manufactures 400 units of a product per month to meet the domestic demand by utilizing a rented machine. The monthly rental, the labor cost and other fixed costs amount to \$1,000. The materials cost and other variable costs are \$6 per unit. The unit selling price of the product is \$9. The maximum production volume of the machine is 600 units per month.

Required:

1. What is the average full cost per unit?
2. The company has received an inquiry from abroad concerning the possibility of shipping 100 units of the product next month. The unit sales price of this shipment is \$7.50. If the company accepts this offer, 500 total units (including domestic demand) must be manufactured next month. Assume that the total labor cost for the month will not change because all 500 units can be manufactured with regular working hours. How should the company reply to this inquiry?



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4. A company has been manufacturing three products, A, B and C, at the rate of one unit per day, respectively. The production time for each product is the same (3 hours). From the most recent month's cost accounting figures, the profit breakdown by product is as shown in the following table.

	A	Product B	C
Selling price	\$200	\$300	\$500
Labor cost (\$120 per day)	40	40	40
Raw materials cost and other Variable costs	100	190	370
Overhead cost (200 per day)	35.9	59.0	105.1

The overhead cost (total \$200 per day) is proportionally allocated among the products based on the total raw materials and labor costs of each product. The labor cost totals \$120 per day and consists of salaries paid each month and allocated in proportion to the hours of work on each product. If the demand is sufficient for each product, on which product should the company place priority production and sales emphasis from the standpoint of profitability? (16 points)

