

Name

ID No

PRINCE OF SONGKLA UNIVERSITY
FACULTY OF ENGINEERING

Final-examination : semester 1
Date : 6 October 2005
Subject : 225-452 Cost Analysis

Academic Year : 2005
Time : 09.00-12.00
Room : R300

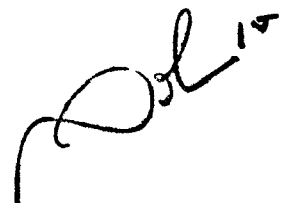
Instruction

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 15 pages.
5. The points are as follows ;

Question No	1	2	3	4	5	Total
Full points scored	15	20	10	15	20	80
Scored						

ทูลจรตในกรสอบ โทษันต่ำ คอ ปรบตกรนรยวชททูลจรต
และพ้กกรเรยน 1 ภคกรศกษ

Boonrueing Manasurakarn



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1. Microdrive Corporation uses machine-hours as the activity base in its flexible budget. Based on the budgeted production of 25,000 motors and the standard of 2 machine-hours per motor, the budgeted level of activity was 50,000 machine-hours. However, actual production for the year was only 20,000 motors, and 42,000 hours of machine time were used to produce these motors.

In preparing an overhead performance report for the year, Microdrive could use the 42,000 machine-hours actually worked during the year or the 40,000 machine-hours that should have been worked according to the standard, only 40,000 hours of machine time should have been used.

Required :

Compute the spending variance in the conditions of

- actual machine-hours are used.
- Standard machine-hours are used

(15 points)



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2. ABC company produces a single product. Variable manufacturing overhead is applied to products on the basis of direct labor-hours. The standard costs for one unit of product are as follows :

Direct material : 6 ounces at \$ 0.50 per ounce.	\$ 3.00
Direct labor : 1.8 hours at \$ 10.00 per hours.	18.00
Variable manufacturing overhead : \$ 1.8 hour at \$ 5.00 per hour.	<u>9.00</u>
Total standard variable cost per unit	\$ 30.00

During June, 2,000 units were produced . The costs associated with June's operation were as follows :

Material purchased : 18,000 ounces at \$ 0.60 per ounce	\$ 10,800
Material used in production : 14,000 ounces	-
Direct labor : 4,000 hours at \$9.75 per hours	39,000
Variable manufacturing overhead costs incurred	20,800

Required :

Compute the material, labor and manufacturing overhead variances .

(20 points)

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2. A company has been manufacturing three products, A, B and C, at a 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.

	Product		
	A	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
Profit	\$ 24.1	\$ 11.0	\$ 15.1

The overhead cost (total \$ 200 per day) is proportional allocated among the products based on the total raw materials and labor cost 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 standard point of profitability? (10 points)

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4. A chemical company produces about 50 similar kinds of plastic products by operating ten extrusion machines. Within the maximum 200 monthly working hours which include 40 hours of overtime work, net operating hours are actually reduced to 160 hours, because 17 hours are spent for regular maintenance and 23 hours for set up and settlement. Monthly production volume amounts to 80,000 units (with a defective rate 10%). For the production of one unit (including each defective one) material cost is estimated to be \$ 9.00 , labor cost \$ 2.50, variable operating cost \$ 2.20 , and overhead expense \$ 3.00 , the selling price of each non defective product is given as \$ 20.00.

Assuming that the demand exceeds the supply capacity, how much profit will accrue in a month as a result of each of the following improvement?

- 4.1 When the defective rate is reduced 10%.
- 4.2 When the time for maintenance, repair, set up, etc.(total 40 hours) is reduce 10%.
- 4.3 When the material cost is reduce 10 % due to design change.
- 4.4 When the selling price is increased 10% due to an improvement in quality.
- 4.5 When production time is reduced 10% due to an improvement in operations.

(15 points)



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5. XYZ is a manufacturing firm that uses job-order costing.
The following informations were record for the year :

Materials Requisition Number 1234 Date February 1, 2005
Job Number to be charged A111
Department Milling

Description	Quantity (pieces)	Unit Cost (Baht)	Total Cost (Baht)
Housing	10	400	
Connector	20	150	

Materials Requisition Number 1244 Date February 1, 2005
Job Number to be charged A111
Department Finishing

Description	Quantity (units)	Unit Cost (Baht)	Total Cost (Baht)
sandpaper	20	10	
emulsion paint	5	250	

Time Ticket

Employee	Time Completed (hours)	Rate per hour (Baht)	Amount (Baht)	Job Number
Mac	4	25		A111
John	5	20		A111
Annie	5	18		A111
Jane	2	22		A113
Angie	6	22		A111

The firm has estimated its total manufacturing overhead cost will be ₱ 40,000 for February and its total direct labor-hours will be 400. this job needs 30 direct labor-hours.

Required :

5.1 Prepare an job cost-sheet.

5.2 Compute the unit product cost.

(20 points.)