

東吳大學 101 學年度碩士班研究生招生考試試題

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系級	會計學系碩士班	考試時間	100 分鐘
科目	成本及管理會計學	本科總分	100 分

****如有需要，答案一律四捨五入至小數第二位。**

一、Multiple Choice (18%)

- The following relationships pertain to a year's budgeted activity for Buckeye Company:

	<u>High</u>	<u>Low</u>
Direct labor hours	400,000	300,000
Total costs	\$154,000	\$129,000

What are the budgeted fixed costs for the year?

 - \$100,000
 - \$25,000
 - \$54,000
 - \$75,000
- Which of the following statements about a just-in-time (JIT) purchasing system is false?
 - Since there is minimal backup, companies must acquire quality raw materials.
 - Raw materials are stockpiled to avoid production disruptions.
 - In comparison with experiences under traditional systems, manufacturers normally deal with a reduced number of suppliers.
 - Supplier reliability tends to be more important under a JIT system than under a traditional purchasing system.
- Bolman, Inc., has only variable costs and fixed costs. A review of the company's records disclosed that when 200,000 units were produced, fixed manufacturing costs amounted to \$800,000 and the cost per unit manufactured totaled \$11. On the basis of this information, how much cost would the firm anticipate at an activity level of 202,000 units?
 - \$1,608,000.
 - \$2,200,000.
 - \$2,214,000.
 - \$2,222,000.
- Strom Company applies overhead based on machine hours. At the beginning of 20x1, the company estimated that manufacturing overhead would be \$500,000, and machine hours would total 20,000. By 20x1 year-end, actual overhead totaled \$525,000, and actual machine hours were 25,000. On the basis of this information, the 20x1 predetermined overhead rate was:
 - \$0.04 per machine hour.
 - \$0.05 per machine hour.
 - \$21 per machine hour.
 - \$25 per machine hour.
- Treetops worked on four jobs during its first year of operation: nos. 401, 402, 403, and 404. Nos. 401 and 402 were completed by year-end, and no. 401 was sold at a profit of 40% of cost. A review of job no. 403's cost record revealed direct material charges of \$20,000 and total manufacturing costs of \$25,000. If Treetops applies overhead at 150% of direct labor cost, the overhead applied to job no. 403 must have been:
 - \$0.
 - \$2,000.
 - \$3,000.
 - \$3,333.
- Diana, Inc., recently completed 56,000 units of a product that was expected to consume four pounds of direct material per finished unit. The standard price of the direct material was \$8.50 per pound. If the firm purchased and consumed 228,000 pounds in manufacturing (cost = \$1,881,000), the direct-material quantity variance would be figured as:
 - \$34,000U.
 - \$34,000F.
 - \$57,000U.
 - \$57,000F.
- The manufacturing cycle efficiency for PQR Company when the processing time is six hours and inspection, waiting, and move time are one hour each is:

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- A. 0.67.
B. 0.75.
C. 0.78.
D. 0.88.
8. When using a balanced scorecard, a company's market share is typically classified as an element of the firm's:
A. financial performance measures.
B. customer performance measures.
C. learning and growth performance measures.
D. internal-operations performance measures.
9. Albany Company has average invested capital of \$800,000 and a target return on investment of 15%. The total cost per unit is \$20 based on a volume level of 25,000 units. Albany's markup percentage on total cost is:
A. 9.375%.
B. 24.0%.
C. 47.5%.
D. 62.5%.

二、12%

Kowo Candle Co. manufactures candles in various shapes, sizes, colors, and scents. Depending on the orders received, not all candles require the same amount of color, dye, or scent materials. Yields also vary, depending upon the usage of beeswax or synthetic wax. Standard ingredients for 1,000 lbs. of candles are:

Input:

	<u>Standard Mix</u>	<u>Standard Cost per pound</u>
Beeswax	200 lbs	\$1.00
Synthetic wax	840	.20
Colors	7	2.00
Scents	<u>3</u>	<u>6.00</u>
Totals	1,050 lbs	
Standard output	1,000 lbs	

During January, the company was busy manufacturing red candles for Valentine's Day. Actual production then was:

Input:

	<u>Standard Mix</u>	<u>Actual Cost per pound</u>
Beeswax	4,100 lbs	\$1.20
Synthetic wax	13,800	.21
Colors	2,200	1.90
Scents	<u>60</u>	<u>5.95</u>
Totals	20,160 lbs	
Actual output	18,500 lbs	

Required: Compute the materials price, mix, and yield variance. (Indicate whether each variance is favorable or unfavorable.)

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三、 16%

Taipei Tool Company manufactures a product in two departments, Shaping and Assembly. The product is cut out of sheet metal, bent to shape, and painted in the Shaping Department. Then, it is transferred to the Assembly Department where component parts purchased from outside vendors are added to the unit. The company uses a process cost system. Data related to operations during the year are:

	<u>Shaping</u>	<u>Assembly</u>
Units in beginning inventory:		
Shaping (80% materials, 40% labor, and 80% overhead)	500	
Assembly (40% materials, 30% labor, and 20% overhead)		800
Units started in process in Shaping Department this period	1,800	
Units transferred from Shaping to Assembly this period	2,000	2,000
Units transferred from Assembly to Finished Goods this period		2,400
Units in ending inventory:		
Shaping (100% materials, 80% labor, and 90% overhead)	300	
Assembly (90% materials, 50% labor, and 40% overhead)		400
Cost in beginning inventory:		
Cost from preceding department		\$73,200
Materials	\$30,200	1,550
Labor	3,200	3,022
Factory overhead	13,000	1,820
Cost added during the current period:		
Materials	89,300	3,660
Labor	16,320	20,060
Factory overhead	46,750	2,880

On January 1, there were 300 units finished goods with a cost of \$100 each. There were 200 units finished goods still on hand at the end of the year.

Required:

1. Using the FIFO cost flow assumption in completing the following requirement.
 - a. Calculate the cost of the December 31 work in process inventory for each department.
 - b. Calculate the cost of goods sold for the year.
2. Assume the company using weighted-average costing. Calculate the cost of goods transferred from Assembly Department to Finished Goods during the year.

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四、 12%

Keeka Corp. developed the following standard unit costs:

Materials	\$6.00
Labor	4.25
Variable overhead	4.80
Fixed overhead	1.55
Variable marketing expenses	1.50
Fixed administrative expenses	<u>4.50</u>
Total	<u>\$ 22.60</u>

The selling price is estimated at \$28, and standard production is 9,000 units. Last year, production amounted to 9,000 units, of which 1,500 units were in inventory at the end of the year. This year, production amounted to 7,700 units; 7,000 units were sold at standard price. There are no work in process or materials inventories.

Required:

1. Compute the operating income for the current year, using (a) absorption costing and (b) direct costing. (Any over- or underapplied factory overhead should be closed to Cost of Goods Sold.)
2. Compute and reconcile the difference in operating income under the two methods.

五、 15%

Home-Bay Corporation sells a line of power tools to retail outlets, generating a cost of goods sold equal to 65% of net sales. The selected data that follow relate to the period just ended for the company's three largest customers: Holly Co., Tony K. Co., and City Inc.

	<u>Holly Co.</u>	<u>Tony K Co.</u>	<u>City Inc.</u>
Gross sales volume:			
Dollars	\$1,800,000	\$4,410,000	\$4,140,000
Number of orders	40	140	100
Type of order:			
Regular	35	95	90
Rush	5	45	10
Sales returns:			
Dollars	\$108,000	\$400,000	\$150,000
Number of returns	3	18	6
Total customer-related costs	\$240,000	\$920,000	\$435,000

Home-Bay's management recently attended a seminar and learned that customers with excessive requests and demands can have a significant, negative impact on corporate profitability.

Required:

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1. For each of the three customers, compute:
 - a. Total customer-related costs as a percentage of gross margin.
 - b. The ratio of regular orders to rush orders.
 - c. The number of sales returns as a percentage of the number of total orders.
2. Prepare a summary of your findings. Should Home-Bay work with any of the customers in an effort to improve results? Explain.

六、 12%

Currently, the Soochow Chemical Company (SCC) is producing two derivatives, KA-1 and KA-2, from the chemical compound ORB developed by the company's research labs. Each week 1,200,000 pounds of ORB are processed at a cost of \$540,000 into 800,000 pounds of KA-1 and 400,000 pounds of KA-2. The proportion of these two outputs cannot be altered, because this is a joint process. KA-1 has no market value until it is converted into a pesticide with the trade name Fasloo. Processing KA-1 into Fasloo costs \$205,000. Fasloo wholesales at \$85 per 100 pounds.

KA-2 is sold as is for \$120 per hundred pounds. However, management has discovered that KA-2 can be converted into two new products by adding 600,000 pounds of compound IST to the 400,000 pounds of KA-2. This joint process would yield 500,000 pounds each of POY-3 and Yetol, the two new products. The additional direct-material and related processing cost of this joint process would be \$226,000. POY-3 and Yetol would each be sold for \$80 per 100 pounds. The company's management has decided not to process KA-2 further based on the analysis presented in the following schedule.

	Process Further			
	KA-2	POY-3	Yetol	Total
Production in pounds	<u>400,000</u>	<u>500,000</u>	<u>500,000</u>	
Revenue	\$480,000	\$400,000	\$400,000	\$800,000
Costs:				
ORB costs	\$180,000*	\$150,000	\$150,000	\$300,000**
Additional direct materials (IST)				
and processing of KA-2	<u>--</u>	<u>113,000</u>	<u>113,000</u>	<u>226,000</u>
Total costs	<u>\$180,000</u>	<u>\$263,000</u>	<u>\$263,000</u>	<u>\$526,000</u>
Weekly gross profit	<u>\$300,000</u>	<u>\$137,000</u>	<u>\$137,000</u>	<u>\$274,000</u>

*\$180,000 is one-third of the \$540,000 cost of processing ORB. When KA-2 is not processed further, one-third of the final output is KA-2 (400,000 out of a total of 1,200,000 pounds).

**\$300,000 is five-ninths of the \$540,000 cost of processing ORB. When KA-2 is processed further, five-ninths of the final output consists of POY-3 and Yetol. The final products then are: 800,000 pounds of KA-1; 500,000 pounds of POY-3; and 500,000 pounds of Yetol.

Required: Evaluate SCC's management's analysis, and make any revisions that are necessary. Your critique and analysis should indicate:

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- Whether management made the correct decision. What are your reasons?
- The gross savings or loss per week resulting from the decision not to process KA-2 further, if different from management's analysis.

七、 15%

Pika Company manufactures and sells adjustable canopies that attach to motor homes and trailers. The market includes both new unit purchasers and purchasers of replacement canopies. Pika developed its current business plan based on the assumption that canopies will sell at a price of \$450 each. The variable costs for each canopy were projected at \$200, and the annual fixed costs were budgeted at \$120,000. Pika's aftertax profit objective was \$270,000; the company's effective tax rate is 40%.

Although Pika's sales usually rise during the second quarter, the May financial statements reported that sales were not meeting expectations. For the first five months of the year, only 350 units had been sold at the established price, with variable costs as planned, and it was clear that the current year after-tax profit projection would not be reached unless some actions were taken. Pika's president assigned a management committee to analyze the situation and develop several alternative courses of action. The following mutually exclusive alternatives were presented to the president.

- The sale price can be reduced by \$40. The sales organization forecasts that, with the significantly reduced sales price, 2,500 units can be sold during the remainder of the year. Total fixed and variable cost will stay as budgeted.
- Variable costs per unit can be lowered by \$25 through the use of less expensive materials and slightly modified manufacturing techniques. The sales price will also be reduced by \$35, and the sales forecast is 2,100 units for the remainder of the year.
- Cut fixed costs by \$12,000 and lower the sales price by 5%. Variable costs per unit will be unchanged. Sales of 2,000 units are expected for the remainder of the year.

Required:

- If no changes are made to the selling price or cost structure, what is the number of units that Pika Company must sell to achieve each of the following:
 - The break-even point.
 - Its original after-tax profit objective of \$240,000
- Determine which one of the three alternatives Pika Company should select. Support your selection with computations demonstrating the effect of each alternative on profit.