

中原大學 104 學年度碩士班考試入學

104/3/4 10:10 AM~11:40 AM

誠實是我們珍視的美德，
我們喜愛「拒絕作弊，堅守正直」的你！

會計學系

科目：成本及管理會計

(共 5 頁，第 1 頁)

可使用計算機(僅限於四則運算、三角函數及對數等基本功能，可程式之功能不可使用)

不可使用計算機

一、Hewitt is a company that produces and sells product A. For the year 2014, the following budgeted absorption costing manufacturing costs per product are:

Material	2 kg at \$3 =	\$ 6
Variable costs		\$ 2
Fixed costs		<u>\$ 6</u>
		\$14

The variable selling costs are \$2 per unit, and the fixed selling costs are \$400,000 per year. The normal production and sales are 100,000 units per year. The budgeted production for 2014 is 90,000 units, the budgeted sales for 2014 are 80,000 units. During 2014, the selling price will be \$25 per unit. On Dec. 31, 2014, the following actual data are given:

- Production: 84,000 units
- Sales: 82,000 units
- Selling price: \$26 per unit
- Purchase price of material: \$3.20 per kg
- Use of material: 160,000 kg
- Variable costs of production department: \$2.4 per unit
- Fixed costs of production department: \$580,000
- Variable costs of selling department: \$2.50 per unit
- Fixed selling costs: \$420,000

Required : (25%)

Compute the following:

- 1 Flexible-budget variance for operating income (5%)
- 2 Sales-volume variance for operating income (5%)
- 3 Operating income volume variance (5%)
- 4 Price and efficiency variances for direct materials (5%)
- 5 Fixed manufacturing overhead spending variance and production-volume variance (5%)

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(共 5 頁，第 2 頁)

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二、The Smack Company is a family-owned business that produces fruit jam. The company has a grinding machine that has been in use for three years. On January 1, 2009, Smacker is considering the purchase of a new grinding machine. Smacker has two options. (1) continue using the old machine or (2) sell the old machine and purchase a new machine. The seller of the new machine isn't offering a trade-in. The following information has been obtained:

	Old Machine	New Machine
Initial purchase cost of machines	\$140,000	\$180,000
Useful life from acquisition date (years)	8	5
Terminal disposal value at the end of useful life on Dec. 31, 2013, assumed for depreciation purposes	\$20,000	\$30,000
Expected annual cash operating costs:		
Variable cost per can of jam	\$0.2	\$0.15
Total fixed costs	\$23,000	\$20,000
Depreciation method for tax purposes	Straight line	Straight line
Estimated disposal value of machines:		
January 1, 2009	\$60,000	\$180,000
December 31, 2013	\$24,000	\$32,000
Expected cans of jam made and sold each year	400,000	400,000

Smack is subject to a 30% income tax rate. Assume that any gain or loss on the sale of machines is treated as an ordinary tax item and will affect the taxes paid by Smack in the year in which it occurs. Smack's after-tax required rate of return is 10%. Assume all cash flows occur at year-end except for initial investment amounts.

Required : (26%)

1. Use the net present value method to determine whether Smacker should use the old machine or acquired the new machine. **(Ignore the income taxes)** (10%)
2. Use the net present value method to determine whether Smacker should use the old machine or acquired the new machine. **(Consider the income taxes)** (16%)

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(共 5 頁，第 3 頁)

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三、The May Corporation manufactures filing cabinets in two operations: machining and finishing. It provides the following information:

	Machining	Finishing
Annual capacity	100,000 units	80,000 units
Annual production	80,000 units	80,000 units
Fixed operating costs (excluding direct materials)	\$800,000	\$480,000
Fixed operating costs per unit produce (\$800,000 ÷ 80,000; \$480,000 ÷ 80,000)	\$10 per unit	\$6 per unit

Each cabinet sells for \$70 and has direct material costs of \$30 incurred at the start of the machining operation. May has no other variable costs. May can sell whatever output it produces. The following requirements refer only to the preceding data. There is no connection between the requirements.

Required : (24%)

1. May is considering using some modern jigs and tools in the finishing operation that would increase annual finishing output by 1,000 units. The annual cost of these jigs and tools is \$25,000. Should May acquire these tools? Show your calculations. (4%)
2. The production manager of the Machining Department has submitted a proposal to do faster setups that would increase the annual capacity of the Machining Department by 10,000 units and would cost \$5,000 per year. Should May implement the change? Show your calculations. (4%)
3. An outside contractor offers to do the finishing operation for 12,000 units at \$12 per unit, double the \$6 per unit that it costs May to do the finishing in-house. Should May accept the subcontractor's offer? Show your calculations. (4%)
4. The Hunt Corporation offers to machine 4,000 units at \$5 per unit, half the \$10 per unit that it costs May to do the machining in-house. Should May accept Hunt's offer? Show your calculations. (4%)
5. May produces 2,000 defective units at the machining operation. What is the cost to May of the defective items produced? Explain your answer briefly. (4%)
6. May produces 2,000 defective units at the finishing operation. What is the cost to May of the defective items produced? Explain your answer briefly. (4%)

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不可使用計算機

四、FL, Inc., manufactures and sells snowboards. FL manufactures a single model P. In the summer of 2011, the management accountant gathered the following data to prepare budgets for 2012:

Materials and Labor Requirements

Direct materials

Wood 6 board feet (b.f.) per snowboard

Fiberglass 7 yards per snowboard

Direct manufacturing labor 6 hours per snowboard

The CEO expects to sell 2,000 snowboards during 2012 at an estimated retail price of \$500 per board. Further, the CEO expects 2012 beginning inventory of 200 snowboards and would like to end 2012 with 300 snowboards in stock.

Direct Materials Inventories

	Beginning Inventory 1/1/2012	Ending Inventory 12/31/2012
Wood	3,000 b.f.	2,400 b.f.
Fiberglass	1,400 yards	2,800 yards

Variable manufacturing overhead is \$8 per direct manufacturing labor-hour. There are also \$63,000 in fixed manufacturing overhead costs budgeted for 2012. FL combines both variable and fixed manufacturing overhead into a single rate based on direct manufacturing labor-hours. Variable marketing costs are allocated at the rate of \$300 per sales visit. The marketing plan calls for 35 sales visits during 2012. Finally, there are \$35,000 in fixed nonmanufacturing costs budgeted for 2012.

Other data include the following:

	2011 Unit Price	2012 Unit Price
Wood	\$30.00 per b.f.	\$32.00 per b.f.
Fiberglass	\$ 5.80 per yard	\$ 6.00 per yard
Direct manufacturing labor	\$25.00 per hour	\$26.00 per hour

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The inventoriable unit cost for ending finished goods inventory on December 31, 2011, is \$375. Assume FL uses a FIFO inventory method for both direct materials and finished goods. Ignore work in process in your calculations.

Required: (25%)

1. Compute the 2012 production budget (in units). (5%)
2. Compute the direct material usage budgets for 2012 (in dollars). (5%)
3. Compute the direct material purchases budgets for 2012 (in dollars) (5%)
4. Compute the cost of a snowboard manufactured in 2012. (5%)
5. Compute an ending inventory budget for both direct materials and finished goods for 2012. (5%)