中原大學 100 學年度 碩士班 入學考試

3 月 19 日 13:30~15:00　　會計學系甲組

誠實是我們珍視的美德，
我們喜愛「拒絕作弊，堅守正直」的你！

科目：成本及管理會計

■可使用計算機，惟僅限不具可程式及多重記憶者　　□不可使用計算機

1. The Bruggs Company manufactures a product called the "Super." Budgeted cost and revenue data for the "Super" are given below, based on sales of 40,000 units.

Sales	$1,600,000
Less: Cost of goods sold	1,120,000
Gross margin	$ 480,000
Less: Operating expenses	100,000
Net income	$ 380,000

Cost of goods sold consists of $810,000 of variable costs and $310,000 of fixed costs. Operating expenses consist of $30,000 of variable costs and $70,000 of fixed costs.

Required:

A. Calculate the break-even point in units and sales dollars. **(5%)**

B. Calculate the safety margin. **(5%)**

C. Bruggs received an order for 6,000 units at a price of $25.00. There will be no increase in fixed costs, but variable costs will be reduced by $0.54 per unit because of cheaper packaging. Determine the projected increase or decrease in profit from the order. **(5%)**

2. Harry's Electronics manufactures TVs and VCRs. During February, the following activities occurred:

	TVs	VCRs
Budgeted units sold	17,640	66,360
Budgeted contribution margin per unit	$90	$156
Actual units sold	20,000	80,000
Actual contribution margin per unit	$100	$158

Required:

Compute the following variances in terms of the contribution margin.

A. Determine the total sales-mix variance. **(5%)**

B. Determine the total sales-quantity variance. **(5%)**

C. Determine the total flexible-budget variance. **(5%)**

3. Julison Company produces a single product. The cost of producing and selling a single unit of this product at the company's normal activity level of 60,000 units per month is as follows:

Direct materials	$34.00
Direct labor	$4.00
Variable manufacturing overhead	$2.00
Fixed manufacturing overhead	$21.30
Variable selling & administrative expense	$2.70
Fixed selling & administrative expense	$7.00

The normal selling price of the product is $79.80 per unit.

An order has been received from an overseas customer for 2,000 units to be delivered this month at a special discounted price. This order would have no effect on the company's normal sales and would not change the total amount of the company's fixed costs. The variable selling and administrative expense would be $0.30 less per unit on this order than on normal sales.

Direct labor is a variable cost in this company.

Required:

A. Suppose there is ample idle capacity to produce the units required by the overseas customer and the special discounted price on the special order is $71.60 per unit. By how much would this special order increase (decrease) the company's net operating income for the month? **(5%)**

B. Suppose the company is already operating at capacity when the special order is received from the overseas customer. What would be the opportunity cost of each unit delivered to the overseas customer? **(5%)**

C. Suppose there is not enough idle capacity to produce all of the units for the overseas customer and accepting the special order would require cutting back on production of 700 units for regular customers. What would be the minimum acceptable price per unit for the special order? **(5%)**

4. The following data relate to Hunter, Inc., a new company:

Planned and actual production	200,000 units
Sales at $48 per unit	170,000 units
Manufacturing costs:	
Variable	$18 per unit
Fixed	$840,000
Selling and administrative costs:	
Variable	$7 per unit
Fixed	$925,000

There were no variances during the period.

Required:

A. Calculate the cost of the ending finished-goods inventory under (1) variable costing and (2) absorption costing. (10%)

B. Determine the company's variable-costing net income. (10%)

C. Determine the company's absorption-costing net income. (10%)

5. The Warren Machine Tool Company is considering the addition of a computerized lathe to its equipment inventory. The initial cost of the equipment is $600,000, and the lathe is expected to have a useful life of five years and no salvage value. Warren uses straight-line depreciation. The cost savings and increased capacity attributable to the machine are estimated to generate increases in the firm's annual cash inflows (before considering depreciation) of $180,000.

Warren is currently in the 40% income tax rate. A 10% after-tax rate of return is desired.

Required:

A. What is the net present value of the investment? Round to the nearest dollar. **(5%)**

B. Should the machine be acquired by the firm? **(5%)**

C. Assume that the equipment will be sold at the end of its useful life for $100,000. If the depreciation amounts are not revised, calculate the dollar impact of this change on the total net present value. **(5%)**

6. The following data pertain to the Oxnard Division of Kemp Company:

Divisional contribution margin	$ 700,000
Profit margin controllable by the divisional manager	320,000
Profit margin traceable to the division	294,400
Average asset investment	1,280,000

The company uses responsibility accounting concepts when evaluating performance, and Oxnard's division manager is contemplating the following three investments. He can invest up to $400,000.

	No. 1	No. 2	No. 3
Cost	$250,000	$300,000	$400,000
Expected income	50,000	54,000	96,000

Required:

A. Calculate the ROIs of the three investments. **(5%)**

B. What is the division manager's current ROI, computed by using responsibility accounting concepts? **(5%)**

C. Which of the three investments would be selected if the manager's focus is on Oxnard's divisional performance? Why? **(5%)**

D. If Kemp has an imputed interest charge of 22%, compute the residual income of investment No. 3. Is this investment attractive from Oxnard's perspective? From Kemp's perspective? Why? **(5%)**