# 淡江大學 100 學年度碩士班招生考試試題

82-1

系別：會計學系　　科目：成本與管理會計

考試日期：2 月 28 日(星期一) 第 2 節　　本試題共 五 大題，三 頁

請注意:

1. 所有答案均需要列示計算過程，否則不予計分。
2. 演算過程中若有出現數字除不盡時，請隨即以四捨五入至小數點後第二位之數字，接續計算之。

本試題雙面印刷

1.The WW Shoe Company operates a chain of shoe stores that sell 10 different styles of inexpensive men's shoes with identical unit costs and selling prices. A unit is defined as a pair of shoes. Each store has a store manager who is paid a fixed salary. Individual salespeople receive a fixed salary and a sales commission. WW is considering opening another store that is expected to have the revenue and cost relationships shown here:

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | **Unit Variable Data (per pair of shoes)** | | | **Annual Fixed Costs** | |
| 2 | Selling Price | $30.00 | | Rent | $60,000 |
| 3 | Cost of shoes | $19.50 | | Salaries | 200,000 |
| 4 | Sales commission | 1.50 | | Advertising | 80,000 |
| 5 | Variable cost per unit | $21.00 | | Other fixed costs | 20,000 |
| 6 | | | | Total fixed costs | $360,000 |

**Required**

Consider each question independently:

1. What is the annual breakeven point in (a) units sold and (b) revenues? **5%**
2. If 35,000 units are sold, what will be the store's operating income (loss)? **5%**
3. If sales commissions are discontinued and fixed salaries are raised by a total of $81,000, what would be the annual breakeven point in (a) units sold and (b) revenues? **5%**
4. Refer to the original data. If, in addition to his fixed salary, the store manager is paid a commission of $0.30 per unit sold, what would be the annual breakeven point in (a) units sold and (b) revenues? **5%**
5. Refer to the original data. If, in addition to his fixed salary, the store manager is paid a commission of $0.30 per unit in excess of the breakeven point, what would be the store's operating income if 50,000 units were sold? **5%**

2.MM Company budgeted production and sales at its maximum capacity of 20,000 units for 2006. However, MM was able to produce and sell only 18,000 units for the year. There are no beginning or ending inventories. Other data for 2006 follow:

| | |
|---|---|
| Budgeted fixed overhead costs | $500,000 |
| Budgeted selling price | $100 |
| Budgeted variable cost per unit | $40 |

**Required**

1. Calculate the static-budget operating income, the flexible-budget operating income, and the operating income based on the budgeted profit per unit. **7%**
2. Compute sales-volume variance, production-volume variance, and operating income volume variance. What do each of these variances measure? **8%**



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3.SS Inc. produces and sells DVDs to business people and students who are planning extended stays in China. It has been very successful with two DVDs: Beginning Mandarin and Conversational Mandarin. It is introducing a third DVD, Reading Chinese Characters. It has decided to market its new DVD in two different packages grouping the Reading Chinese Characters DVD with each of the other two language DVDs. Information about the separate DVDs and the packages follow.

| DVD | Selling Price |
|---|---|
| Beginning Mandarin (BegM) | $60 |
| Conversational Mandarin (ConM) | $50 |
| Reading Chinese Characters (RCC) | $40 |
| BegM + ConM | $100 |
| BegM + RCC | $90 |
| ConM + RCC | $72 |
| BegM + ConM+ RCC | $120 |

**Required**

1. Using the selling prices, allocate revenues from the BegM + RCC package to each DVD in that package using the incremental method in either order. **6%**
2. Using the selling prices, allocate revenues from the ConM+ ConM + RCC package to each DVD in that package using the Shapley value method. (assuming there are the same weights on all products) **6%**
3. What is the major modification for the question (2) if the weights on all products are different. Explain it briefly. **4%**
4. What is the major modification for the question (2) if the form of "ConM+ ConM + RCC" change to "a×ConM + b×ConM + c×RCC", in which a, b, c is scalar respectively. **4%**

4. The MD 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) | $640,000 | $400,000 |
| Fixed operating costs per unit produced ($640,000 ÷ 80,000; $400,000 ÷ 80,000) | $8 per unit | $5 per unit |

Each cabinet sells for $72 and has direct materials costs of $32 incurred at the start of the machining operation. MD has no other variable costs. MD can sell whatever output it produces. The following requirements refer only to the preceding data. There is no connection between the requirements.

**Required**

1. MD 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 $30,000. Should MD acquire these tools? Show your calculations. **10%**
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 cost $5,000 per year. Should MD implement the change? Show your calculations. **10%**

5.The Orsilo Corporation makes and sells 10,000 boom boxes each year. Its Assembly Division purchases components from other divisions of Orsilo of from external suppliers and assembles the boom boxes. In particular, the Assembly Division can purchase the tape player from the Cassette Division of Orsilo or from Johnson Corporation. Johnson agrees to meet all of Orsilo's quality requirements and is currently negotiating with the Assembly Division to supply 10,000 tape players at a price between $38 and $45 per tape player.

A crucial component of the tape player is the head mechanism that reads the tape. To ensure the quality of its boom boxes, Orsilo requires that if Johnson wins the contract to supply tape players, it

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must purchase the head mechanism from Orsilo's Cassette Division for $20 each.

The Cassette Division can manufacture at most 12,000 cassette decks annually. It also manufactures as many additional head mechanisms as can be sold. The incremental cost of manufacturing the head mechanism is $15 per unit. The incremental cost of manufacturing a tape player (including the cost of the head mechanism) is $25 per unit, and any number of tape players can be sold for $35 each in the external market.

**Required**

1. What are the incremental costs minus revenues from sale to external buyers for the company as a whole if the Cassette Division transfers 10,000 tape players to the Assembly Division and sells the remaining 2,000 tape players on the external market? **5%**
2. What are the incremental costs minus revenues from sale to external buyers for the company as a whole if the Cassette Division sells 12,000 tape players on the external market and the Assembly Division accepts Johnson's offer at (a) $38 per tape player or (b) $45 per tape player? **5%**
3. What is the minimum transfer price per tape player at which the Cassette Division would be willing to transfer 10,000 tape players to the Assembly Division? **4%**
4. Suppose that the transfer price is set to the minimum computed in requirement 3 plus $1, and the division managers at Orsilo are free to make their own profit-maximizing sourcing and selling decisions. Now, Johnson offers 10,000 tape players for $40.50 each. **6%**
   a. What decisions will the managers of the Cassette Division and Assembly Division make?
   b. Are these decisions optimal for Orsilo as a whole?
   c. Based on this exercise, at what price would you recommend the transfer price be set?