

# 東吳大學 108 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  |

一. Distinguish the following pair of terms: (16%)

1. Committed cost v.s Discretionary cost
2. Lead Indicators v.s Lag Indicators
3. Direct Cost v.s Variable cost
4. Cost object v.s Cost pool

二. (22%)

Clearview window Company manufactures windows for the home-building industry. The window frames are produced in the Frame Division. The frames are then transferred to the Glass Division, where the glass and hardware are installed. The company's best-selling product is a three-by- four-foot, doublepaned operable window.

The Frame Division also can sell frames directly to custom home builders, who install the glass and hardware. The sales price for a frame is \$80. The Glass Division sells its finished windows for \$190. The markets for both frames and finished windows exhibit perfect competition.

The standard variable cost of the window is detailed as follows

|                   | Frame Division | Glass Division |
|-------------------|----------------|----------------|
| Direct material   | \$15           | \$30           |
| Direct labor      | 20             | 15             |
| Variable overhead | 30             | 30             |
| <b>Total</b>      | <b>\$65</b>    | <b>\$75</b>    |

The standard variable transportation cost per window is \$5, both for Frame and Glass division's finished product delivery.

Following is a proposed general rule of transfer price that will ensure goal congruence:

$$\text{Transfer price} = \text{Outlay cost per unit if goods are transferred} + \text{Opportunity cost per unit to the organization because of the transfer}$$

**Required:**

1. Assume there is no excess capacity in the Frame Division, prove that the proposed general rule of transfer price will promote goal congruence.
2. Suppose a local organization makes a special offer to the Glass Division. The organization offers to pay \$140 per finished window. Try to prove the general rule of transfer price promote goal congruence.
3. Assume that there is excess capacity in the Frame Division, try to prove the general rule of transfer price promote goal congruence.

(For each requirement, discuss all three parties: Frame, glass, and the company as a whole, respectively)

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### 三. (22%)

Justa Corporation products and sells three products, A, B, and C. The three products are sold in a local market and in a regional market. At the end of the first quarter of the current year, the following income statement was prepared:

|                        | Local       | Regional  |
|------------------------|-------------|-----------|
| Sales                  | \$1,000,000 | \$300,000 |
| Cost of goods sold     | 775,000     | 235,000   |
| Gross profit           | 225,000     | 65,000    |
| Marketing expense      | 60,000      | 45,000    |
| Administrative expense | 40,000      | 12,000    |
| Operating income       | \$ 125,000  | \$ 8,000  |

Management has expressed special concern with the regional market because of the extremely poor return on sales. This market was entered a year ago because of the excess capacity. It was originally believed that the return on sales would improve with time, but after a year, no noticeable improvement can be seen from the results as reported in the quarterly statement.

In deciding whether to eliminate the regional market, the following information has been gathered:

|  | A         | B         | C         |
|--|-----------|-----------|-----------|
| Sales                                      | \$500,000 | \$400,000 | \$400,000 |
| Variable manufacturing expense(% of sales) | 60%       | 70%       | 60%       |
| Variable marketing expense (% of sales)    | 3%        | 2%        | 2%        |

|         | Sales by markets |           |
|---------|------------------|-----------|
| Product | Local            | Regional  |
| A       | \$400,000        | \$100,000 |
| B       | 300,000          | 100,000   |
| C       | 300,000          | 100,000   |

All fixed expense is based upon a prorated yearly amount. All administrative expense and fixed manufacturing expense are common to the three products and the two markets and are fixed for the period, regardless of whether a market is eliminated. Remaining marketing expense is fixed for the period and separable by market. All separable cost would be eliminated with the dropping of a market.

### Required:

1. Assuming that there are no alternative uses for Justa Corporation's present capacity, should the regional market be dropped?
2. It is believed that a new product to replace Product C could be ready for sale next year if Justa Corporation decided to go ahead with continued research. The new product could be produced by simply converting equipment presently used in producing Product C. This conversion would increase fixed costs by \$10,000 per quarter. Calculate the minimum contribution margin per quarter for the new product if Justa Corporation is to be no worse off financially than at present.

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**四. (20%)**

Brown Sporting Goods, Inc. buys baseballs at \$10 per dozen from its wholesales. Brown buys 1,600 dozen every 2 months. The firm incurs interest expense of 20% on its inventory investment. In addition, rent, insurance, and property tax per year for each dozen baseballs in the average inventory is \$0.5. The cost involved in handling each purchase order is \$3,000.

**Required:**

1. Determine ordering and carrying costs under current policy.
2. Determine the economic order quantity and the related ordering and carrying costs.
3. What is the order-size decision Brown should make, if the supplier offers the following quantity discount schedule.

|                        |      |
|------------------------|------|
| $Q < 4,000$            | \$11 |
| $4,000 \leq Q < 6,000$ | \$10 |
| $6,000 \leq Q$         | \$9  |

**五. (20%)**

Three Companies are each producing and selling annually 10,000 units of a similar product at a unit sales price of \$10. The companies have fixed and variable costs as follows:

| Company | Fixed Cost | Variable Cost per Unit |
|---------|------------|------------------------|
| A       | \$20,000   | \$6                    |
| B       | 40,000     | 4                      |
| C       | 60,000     | 2                      |

Each company contemplates a price cut, from \$10 to \$8, in the expectation that sales will increase from 10,000 to 15,000 units per year.

**Required:**

1. Distinguish the difference between Financial leverage and Operating leverage.
2. Compute the Operating leverage factor for each company.
3. Prepare the CVP graph for the three companies about the effect of the price cut.
4. Explain the differences of the change in contribution margin of these three companies, by applying the concept of Operating leverage.