

東吳大學 102 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 |

I. Multiple Choice: choose the best answer for each question and write your answers sequentially on the first page of your answer sheets. (10%)

(1) The following data relate to the Happy Division of Asia Pacific System Inc.:

| | |
|--------------------|--------------|
| Sales | \$10,000,000 |
| Variable costs | 3,000,000 |
| Direct fixed costs | 5,000,000 |
| Invested capital | 2,000,000 |
| Capital charge | 12% |

The divisional residual income is:

A.\$240,000 B.\$1,760,000 C.\$2,000,000 D.\$7,000,000 E.none of the above

(2) The E. Mundo Company is preparing its cash budget for the month of May. The following information is available concerning its accounts receivable:

| | |
|---|------------|
| Estimated credit sales for May | \$ 200,000 |
| Actual credit sales for April..... | \$ 150,000 |
| Estimated collections in May for credit sales in May | 20% |
| Estimated collections in May for credit sales in April | 70% |
| Estimated collections in May for credit sales prior to April..... | \$ 20,000 |
| Estimated write-offs in May for uncollectible credit sales..... | \$ 8,000 |
| Estimated provision for bad debts in May for credit sales in May..... | \$ 7,000 |

The estimated cash receipts from accounts receivable collections in May are:

A. \$158,000 B. \$165,000 C. \$157,000 D. \$150,000 E. \$160,000

(3) Flintstone Company uses flexible budgeting for cost control. Flintstone produced 10,800 units of a product during March, incurring indirect material costs of \$13,000. Its static budget for the year reflected variable indirect material costs of \$180,000 at a production volume of 144,000 units. A flexible budget for March production would reflect indirect material costs of:

A. \$13,000 B. \$13,500 C. \$13,975 D. \$11,700
E. none of the above

(4) The effect of discontinuing a department with a contribution to overhead of \$30,000 and allocated overhead of \$48,000, of which \$26,000 cannot be eliminated, would be to:

A.increase profit by \$ 8,000 B.decrease profit by \$26,000
C.decrease profit by \$ 8,000 D.decrease profit by \$22,000
E.increase profit by \$ 4,000

(5) Production of a special order will increase the contribution margin when the additional revenue from the special order is greater than:

A. the nonvariable costs incurred in producing the order
B. the direct materials and labor costs in producing the order
C. the fixed costs incurred in producing the order
D. the indirect costs of producing the order
E. the marginal cost in producing the order

(6) Faced with a long-run make-or-buy decision, the manager should do all of the following *except*:

A. compare the making of the parts with alternative uses that could be made of the firm's own facilities if the parts are purchased
B. compare the cost of making the parts with the cost of buying them
C. consider differences in the required capital investment and the timing of cash flows
D. use a cost study with only the differential costs and with no allocation of existing fixed overhead or profit
E. consider the quantity and quality of the parts as well as the technical know-how required

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- (7) Standard costing will produce the same income before extraordinary items as does actual costing when standard cost variances are assigned to:
- A. work in process and finished goods inventories
 - B. an income or expense account
 - C. cost of goods sold and inventories
 - D. cost of goods sold
 - E. income summary
- (8) If 400 units are produced and 600 units are sold, _____ results in the greatest amount of operating income.
- A. throughput costing
 - B. variable costing
 - C. absorption costing
 - D. period costing
 - E. prime costing
- (9) A company had income of \$50,000 using variable costing for a given period. Beginning and ending inventories for that period were 13,000 units and 18,000 units, respectively. Ignoring income taxes, if the fixed overhead application rate were \$2.00 per unit, what would the income have been using absorption costing?
- A. \$86,000
 - B. \$40,000
 - C. \$50,000
 - D. \$60,000
 - E. \$70,000
- (10) Responsibility reports should possess all of the following characteristics *except*:
- A. being issued with regularity
 - B. fitting the organization chart
 - C. being consistent in form and content each time they are issued
 - D. being stated only in dollars for operating management
 - E. comparing budgeted with actual figures

II. Sara Company buys and resells a perishable product. A large purchase at the beginning of each month provides a lower per unit cost and assures that Sara can purchase all the items it wishes. However, unsold units at the end of each month are worthless and must be discarded. If an inadequate quantity is purchased, additional units of acceptable quality are not available.

The units, which Sara sells for \$3 each, are purchased at a fixed fee of \$100,000 per month plus \$1 each, if at least 100,000 units are ordered and if they are ordered at the beginning of the month.

The needs of Sara's customers limit the possible sales volumes to only four quantities per month — 100,000, 125,000, 150,000, or 175,000 units. However, the total quantity needed for a given month cannot be determined prior to the date Sara must make its purchases. The sales managers are willing to place a probability estimate on each of the four possible sales volumes each month. They noted that the probabilities for the four sales volumes change from month to month because of the seasonal nature of the customers' businesses. Their probability estimates for December, 2012, sales quantities are 25% for 100,000, 35% for 125,000, 30% for 150,000, and 10% for 175,000.

Required: Identify the best strategy according to the expected value of each of the four possible strategies of ordering units, assuming that only the four quantities specified are ever sold and that occurrences are random events. **(10%)**

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III. Information on four investment proposals is given below:

| | Investment Proposal | | | |
|-----------------------------|---------------------|-------------|------------|-------------|
| | A | B | C | D |
| Investment required | \$(90,000) | \$(100,000) | \$(70,000) | \$(120,000) |
| Present value of cash flows | 126,000 | 142,000 | 105,000 | 160,000 |
| Net present value | \$ 36,000 | \$ 42,000 | \$ 35,000 | \$ 40,000 |
| Discount rate | 12% | 10% | 12% | 12% |
| Life of the project | 5 years | 7 years | 6 years | 6 years |

Required: (Round off your answers to second decimal place, if needed.) (20%)

- Compute the profitability index for each investment proposal.
- Compute the annualized net present value for each investment proposal by using the following information:

Present value of an annuity of \$1:

| Time Periods | 10% | 12% |
|--------------|-------|-------|
| 5 | 3.791 | 3.605 |
| 6 | 4.355 | 4.111 |
| 7 | 4.868 | 4.564 |

- Rank the proposals in terms of preference by:
 - the profitability index,
 - the annualized net present value.

IV. Emerson Company, which uses throughput costing, just completed its first year of operations. Planned and actual production equaled 10,000 units, and sales totaled 9,600 units at \$72 per unit. Cost data for the year are as follows:

| | |
|-----------------------------------|---------|
| Direct materials (per unit) | \$ 11 |
| Conversion cost: | |
| Direct labor | 46,000 |
| Variable factory overhead | 65,000 |
| Fixed factory overhead | 220,000 |
| Selling and administrative costs: | |
| Variable (per unit) | 8 |
| Fixed | 118,000 |

Required: (20%)

- How much of the cost would be held in year-end inventory under (a) absorption costing, (b) variable costing, and (c) thruhgpt costing?
- How much of the company's total cost for the year would be included as an expense on the period's income statement under (a) absorption costing, (b) variable costing, and (c) thruhgpt costing?
- Prepare Emerson's throughput-costing income statement.

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V. Taoyuan Company is a manufacturer of chemicals for various purposes. One operation produces SPL-3, a chemical used in swimming pools; PST-4, a chemical used in pesticides; and RJ-5, a by-product that is sold to fertilizers manufacturers. The company uses market value of its main products to allocate joint production cost, and the FIFO inventory method to cost the main products. The by-product is inventoried at its market value less its disposal cost, and this value is used to reduce the joint production cost before the allocation to the main products.

Data regarding November operations are presented in the following table. During this month, joint production cost of \$1,702,000 was incurred in the manufacture of SPL-3, PST-4 and RJ-5.

| | SPL-3 | PST-4 | RJ-5 |
|--|------------|------------|---------|
| Finished goods inventory in gallons (November 1) | 18,000 | 52,000 | 3,000 |
| November sales in gallons | 650,000 | 325,000 | 150,000 |
| November production in gallons | 700,000 | 350,000 | 170,000 |
| Sales value per gallon at split-off | ----- | ----- | \$.70* |
| Additional processing cost | \$ 874,000 | \$ 816,000 | ----- |
| Final sales value per gallon | \$ 4.00 | \$ 6.00 | ----- |

* Disposal costs of \$.10 per gallon, which are incurred to sell the product, have not been deducted to arrive at this sales value.

Required:

- (1) Determine the allocation of joint production cost for November. **(9%)**
- (2) Compute the cost assigned to the finished goods inventories for SPL-3, PST-4 and RJ-5 as of November 30. **(6%)**
- (3) The company has an opportunity to sell PST-4 at the split-off point for \$3.50 per gallon. Prepare an analysis showing whether the company should sell PST-4 at the split-off point or continue to process this product further. **(5%)**

VI. Shasta Hills, a winery in northern California, manufactures a premium cabernet and sells primarily to distributors. Wine is sold in cases of one dozen bottles. In the year ended December 31, 2012, Shasta Hills sold 242,400 cases at an average selling price of \$94 per case. The following additional data are for Shasta Hills for the same year (assume constant unit costs and no price, spending, or efficiency, or production-volume variances):

| | |
|--------------------------------------|---------------|
| Beginning inventory, January 1, 2012 | 32,600 cases |
| Ending inventory, December 31, 2012 | 24,800 cases |
| Fixed manufacturing costs | \$3,753,600 |
| Fixed operating costs | \$6,568,800 |
| Variable costs | |
| Direct materials | |
| Grapes | \$16 per case |
| Bottles, corks, and crates | \$10 per case |
| Direct labor | |
| Bottling | \$6 per case |
| Winemaking | \$14 per case |
| Aging | \$2 per case |

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VI. (Continued...)

Required: (20%)

1. Calculate the number of cases Shasta Hills produced in 2012. (4%)
2. Find the breakeven point (number of cases) in 2012: (8%)
 - a. under variable costing
 - b. under absorption costing
3. Grape costs are expected to increase 25% in 2013. Assuming all other data are the same, calculate the minimum number of cases Shasta Hills must sell in 2013 to break even: (8%)
 - a. under variable costing
 - b. under absorption costing