

銘傳大學 97 學年度研究所碩士班招生考試

會計學系碩士班

成本與管理會計學試題(第三節)

(第 1 頁共 6 頁) (限用答案本作答)

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I、單選題：(15%)

1. Pleasant Valley Company makes two ceramic products, vases (V) and bowls (B). Each vase requires two pounds of material and three hours of labor. Each bowl requires two pounds of material and one hour of labor. During the next production week, there will be 100 pounds of material and 60 hours of labor available to make vases and bowls. Each pound of material costs \$4 and each hour of labor costs \$10. All factory overhead is fixed; it is estimated to be \$200 for this production process for a week. Pleasant Valley sells vases for \$50 each and bowls for \$35 each. The objective function for Pleasant Valley would be:

- A. maximize $Z = \$50V + \$35B$
- B. maximize $Z = \$12V + \$17B$
- C. minimize $Z = \$38V + \$18B$
- D. maximize $Z = \$12V + \$17B = \$200$
- E. some function other than those given above

2. All of the following are distinctions that usually exist between traditional and ABC costing systems, *except* that:

- A. the number of overhead cost pools tends to be higher in ABC systems
- B. the number of allocation bases tend to be higher in ABC systems
- C. costs within an ABC cost pool tend to be more homogeneous than the costs within a traditional system's cost pool
- D. all ABC systems are one-stage costing systems, while traditional systems may be one- or two-stage
- E. all of the above are distinctions

3. An analysis of Ragan, Inc.'s operating income for the last two years showed the following:

Operating income for 2005	\$600,000
Add growth component	15,000
Add price-recovery component	100,000
Deduct productivity component	(8,000)
Operating income for 2006	\$707,000

This gain in operating income is consistent with a:

- A. downsizing strategy
- B. reengineering strategy
- C. product differentiation strategy
- D. cost leadership strategy

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4. _____ is the fundamental rethinking and redesign of business processes to achieve improvements in critical measures of performance such as cost, quality, service, speed, and customer satisfaction.

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- A. Strategy
- B. Customer perspective
- C. Learning and growth perspective
- D. Reengineering

5. The Glass Shop, a manufacturer of large windows, is experiencing a bottleneck in its plant. Setup time at one of its workstations has been identified as the culprit. A manager has proposed a plan to reduce setup time at a cost of \$72,000. The change will result in 8,000 additional windows. The selling price per window is \$18, direct labor costs are \$3 per window, and the cost of direct materials is \$5 per window. Assume all units produced can be sold. The change will result in an increase in the throughput contribution of:
- A. \$104,000
 - B. \$80,000
 - C. \$32,000
 - D. \$8,000

II、填充題：(50%)

請在答案本上依下列格式作答(題號務必標示清楚)：

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.

1. Maxwell Company has an opportunity to acquire a new machine to replace one of its present machines. The new machine would cost \$90,000, have a 5-year life, and no estimated salvage value. Variable operating costs would be \$100,000 per year. The present machine has a book value of \$50,000 and a remaining life of 5 years. Its disposal value now is \$5,000, but it would be zero after 5 years. Variable operating costs would be \$125,000 per year. Ignore income taxes. Considering the 5 years in total, what would be the difference in profit before income taxes by acquiring the new machine as opposed to retaining the present one? _____
2. Sue Me Manufacturing is considering producing a new product. Sue Me Manufacturing expects to sell 2,000 units over the product's expected 4-year life. Variable production costs and variable selling costs are estimated at \$42 and \$16 per unit, respectively. Annual fixed production and fixed selling costs are estimated at \$15,000 and \$5,000, respectively. Research and development costs are estimated at \$184,000. If the product sells for \$200 per unit, the expected profit over the entire product life cycle is _____.
3. Jeffrey Co. manufactures Products A and B from a joint process. Market value at split-off was \$700,000 for 10,000 units of A, and \$300,000 for 15,000 units of B. Using the market value at split-off approach, joint costs properly allocated to A were \$140,000. Total joint costs were _____.

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4. Willis, Inc. instituted a new process in October. During October, 10,000 units were started in Department A. Of the units started, 1,000 were lost in the process due to normal production shrinkage, 7,000 were transferred to Department B, and 2,000 remained in work in process at October 31. The work in process at October 31 was 100% complete as to materials costs and 50% complete as to conversion costs. Materials costs of \$27,000 and conversion costs of \$40,000 were charged to Department A in October. What were the total costs transferred to Department B? _____

5. The following data relate to the Happy Division of Euphoria, 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 _____.

6. Assume the following cost information for Janice Company:

Selling price per unit	\$144
Variable costs per unit	\$80
Total fixed costs	\$80,000
Tax rate	40%

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If fixed costs increased by 10% and management wanted to maintain the original break-even point, then the selling price per unit would have to be increased to _____.

7. The Webb Company's new process will be carried out in one department. The production process has an expected learning curve of 80%. The costs subject to the learning effect for the first batch produced by the process were \$10,000. Using the simplest form of the learning function, the cumulative average cost after the sixteenth batch is _____.
8. A company is considering the purchase of some equipment that in the second year of operation should cause an increase in sales of \$150,000, an increase in cash expenses of \$90,000, and a depreciation deduction of \$45,000. If the appropriate tax rate is 20%, the after-tax effect of this equipment on cash flows in year two is _____.
9. Ying Company plans to sell 200,000 units of finished product in October and anticipates a growth rate in sales of 5% per month. The desired monthly ending inventory in units of finished product is 80% of the next month's estimated sales. There are 160,000 finished units in the inventory on September 30. Ying's production requirement in units of finished product for the three-month period ending December 31 is _____.

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10. Thomas Company has two service departments, Maintenance and Personnel, as well as two production departments, Mixing and Finishing. Maintenance costs are allocated based on square footage while personnel costs are allocated based on number of employees. The following information has been gathered for the current year:

	<u>Maintenance</u>	<u>Personnel</u>	<u>Mixing</u>	<u>Finishing</u>
Direct dept. costs	\$126,000	\$84,000	\$105,000	\$175,000
Square footage	800	400	1,600	1,200
Number of employees	8	12	24	32

If the step-down method is used to allocate costs and the Maintenance Department is allocated first, then the cost of the Mixing Department after allocation would be _____.

III、計算題 (請列計算過程, 否則不予計分): (35%)

◎ 請分別回答下列各自獨立之問題, 題號務必標示清楚

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1. Clouseau Corp. developed the following standard unit costs:

Materials.....	\$ 6.00
Labor.....	4.25
Variable overhead.....	4.80
Fixed overhead.....	1.55
Variable marketing expenses.....	1.50
Fixed administrative expenses.....	4.50
Total.....	<u>\$ 22.60</u>

The selling price is estimated at \$30, and standard production is 9,000 units. Last year, production amounted to 9,000 units, of which 1,500 units were in inventory at the end of the year. This year, production amounted to 7,700 units; 7,000 units were sold at standard price. There are no work in process or materials inventories. Any over- or underapplied factory overhead should be closed to Cost of Goods Sold.

Required:

Compute the difference between absorption-costing operating income and variable-costing operating income.

2. 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.

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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, 19A, sales quantities are 25% for 100,000, 35% for 125,000, 30% for 150,000, and 10% for 175,000.

Required:

Prepare a payoff table showing 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. Identify the best strategy.

3. F Troop is experiencing difficulties constructing a fort on the Red River. Col. Storch proposes that a PERT network be used to organize the construction activities for the fort. Each activity, together with its immediate predecessor activity and the completion time for the activity, is given below:

<u>Activity</u>	<u>Type of Activity</u>	<u>Predecessor Activity</u>	<u>Completion Time (in Weeks)</u>
1	Clear trees	0	12
2	Sort trees by size	Clear trees	6
3	Strip trees into logs	Clear trees	9
4	Construct walls	Strip trees into logs	12
5	Construct gate	Strip trees into logs	3
6	Build turret	Sort trees by size	6
7	Build captain's house	Strip trees into logs	8
8	Build officers' houses	Construct walls	9
9	Build enlisted personnel's barracks	Build officers' houses	6
10	Hold completion ceremony	All others	1

Required:

Identify the critical path and show the completion time in weeks.

4. The Chemical Division of Bill Company produces lawn-care chemicals. One-third of Chemical's output is sold to the Lawn Services Division of Bill; the remainder is sold to outside customers. The Chemical Division's estimated sales and standard cost data for the year follow:

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	Lawn Services	Outsiders
Sales	\$15,000	\$40,000
Variable cost	(10,000)	(20,000)
Fixed cost	<u>(3,000)</u>	<u>(6,000)</u>
Gross profit	<u>\$ 2,000</u>	<u>\$14,000</u>
Gallons sold	<u>5,000</u>	<u>10,000</u>

The Lawn Services Division has an opportunity to purchase 5,000 gallons of identical quality from an outside supplier at a cost of \$1.75 per gallon on a continuing basis. Assume that the Chemical Division cannot sell any additional products to outside customers, that the fixed costs cannot be reduced, and that no alternative use of facilities is available.

Required:

Should Bill allow its Lawn Services Division to purchase the chemicals from the outside supplier? Support your answer by computing the increase or decrease in Bill Company operating costs.

5. Blend Rite Inc. assembles and sells electric mixers. All parts are purchased and labor is paid on the basis of \$22 per mixer assembled. The cost of the parts per mixer totals \$20. As the company handles only this one product, the unit cost basis for applying factory overhead is used. Estimated factory overhead for the coming period, based on a production of 40,000 mixers, is as follows:

Indirect materials	\$60,000
Indirect labor	180,000
Light and power	45,000
Depreciation	35,000
Miscellaneous	16,000

During the period, 42,000 mixers were assembled and actual factory overhead was \$355,000. These units were completed but not yet transferred to the finished goods storeroom.

Required:

Determine the amount of over- or underapplied factory overhead.

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