

東吳大學 113 學年度碩士班招生考試試題

第1頁，共5頁

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

※一律作答於答案卷上(題上作答不予計分)；並務必標明題號，依序作答。

1. The SCU Company manufactures furniture in two departments: molding and finishing. The company uses the weighted-average method of process costing. August data for the finishing department are as follows:

Units of beginning work-in-process inventory	25,000
Percentage completion of beginning work-in-process units	25%
Units started	175,000
Units completed	125,000
Units in ending inventory	50,000
Percentage completion of ending work-in-process units	95%
Spoiled units	25,000
Total costs added during current period:	
Direct materials	\$1,638,000
Direct manufacturing labor	\$1,589,000
Manufacturing overhead	\$1,540,000
Work in process, beginning:	
Transferred-in costs	\$207,250
Conversion costs	\$105,000
Cost of units transferred in during current period	\$1,618,750

Conversion costs are added evenly during the process. Direct material costs are added when production is 90% complete. The inspection point is at the 80% stage of production. Normal spoilage is 10% of all good units that pass inspection. Spoiled units are disposed of at zero net disposal value.

Required : (15%)

For August, summarize total costs to account for and assign these costs to

- (1) units completed and transferred out
 - (2) abnormal spoilage
 - (3) units in ending work in process inventory.
2. The controller for Tulsa Medical Supply Company has established the following activity cost pools and cost drivers.

Activity Cost Pool	Budgeted Overhead		Budgeted Level for Cost Driver
	Cost	Cost Driver	
Machine setups	\$250,000	Number of setups	125
Material handling	75,000	Weight of raw material	37,500 lb.
Hazardous waste control	25,000	Weight of hazardous chemicals used	5,000 lb.
Quality control	75,000	Number of inspections	1,000
Other overhead costs	200,000	Machine hours	20,000

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An order for 1,000 boxes of medical-testing agent has the following production requirements.

Machine setups	5 setups
Raw material	10,000 pounds
Hazardous materials	2,000 pounds
Inspections	10 inspections
Machine hours	500 machine hours

Required : (12%)

- (1) Suppose Tulsa Medical Supply Company were to use a single predetermined overhead rate based on machine hours. How much overhead would be assigned to per box of testing agent.
 - (2) Suppose Tulsa Medical Supply Company were to use Activity-Based Costing. What is the overhead cost per box of testing agent?
 - (3) Which system do you recommend? Why? (Please provide three reasons, otherwise no points will be awarded.)
3. Anderson Windows Inc. is in the process of setting a target price on its newly designed tinted window. Cost data relating to the window at a budgeted volume of 4,000 units are as follows.

	Per Unit	Total
Direct materials	\$100	
Direct labor	70	
Variable manufacturing overhead	20	
Fixed manufacturing overhead		\$120,000
Variable selling and administrative expenses	10	
Fixed selling and administrative expenses		102,000

Anderson Windows uses cost-plus pricing methods that are designed to provide the company with a 25% ROI on its tinted window line. A total of \$1,016,000 in assets is committed to production of the new tinted window.

Required: (8%)

- (1) Compute the target price and the markup percentage under absorption-cost pricing that will allow Anderson Windows to realize its desired ROI.
- (2) Compute the markup percentage under variable-cost pricing that will allow Anderson Windows to realize its desired ROI.

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4. API Service I Writing Word Wizard is a publishing company with a number of different book lines. Each line has contracts with a number of different authors. The company also owns a printing operation called Quick Press. The book lines and the printing operation each operate as a separate profit center. The printing operation earns revenue by printing books by authors under contract with the book lines owned by Word Wizard, as well as authors under contract with other companies. The printing operation bills out at \$0.01 per page, and a typical book requires 500 pages of print. A manager from Business Books, one of Word Wizard's book lines, has approached the manager of the printing operation offering to pay \$0.007 per page for 1,500 copies of a 500-page book. The book line pays outside printers \$0.009 per page. The printing operation's variable cost per page is \$0.004.

Required: (8%)

- (1) Assume that the printing operation is booked solid for the next 2 years, and it would have to cancel an obligation with an outside customer in order to meet the needs of the internal division. Please determine the minimum transfer price.
- (2) Calculate the change in contribution margin to the company as a whole, if top management forces the printing operation to accept the \$0.007 per page transfer price when it has no available capacity.

5. Talia Company produces a single product. The company has set standards as follows for materials and labor:

	Direct Materials	Direct Labor
Standard quantity or hours per unit	? kilograms	1.25 hours
Standard price or rate	? per kilogram	\$10 per hour
Standard cost per unit	?	\$12.50

During the past month, the company purchased 3,000 kilograms of direct materials at a cost of \$8,250. All of this material was used in the production of 700 units of product. Direct labor cost totaled \$6,825 for the month. The following variances have been computed:

Materials quantity variance	\$600 Unfavorable
Total materials variance	\$150 Favorable
Labor efficiency variance	\$2,250 Favorable

Required: (12%)

(1) For direct materials:

- i. Compute the standard price per kilogram for materials.
- ii. Compute the standard quantity of materials allowed per unit of product.

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(2) For direct labor:

- i. Compute the actual direct labor cost per hour for the month.
- ii. Compute the labor rate variance.

6. Lucy Hall owns a professional character business in a large metropolitan area. She hires local college students to play these characters at children's parties and other events. Linda provides balloons, cupcakes, and punch. For a standard party the cost on a per-person basis is as follows:

Balloons, cupcakes, and punch	\$7
Labor (0.25 hour * \$20 per hour)	5
Overhead (0.25 hour * \$40 per hour)	10
Total cost per person	\$22

Lucy is quite certain about the estimates of the materials and labor costs but is not as comfortable with the overhead estimate. The overhead estimate was based on the actual data for the past 9 months, which are presented here. These data indicate that overhead costs vary with the direct labor-hours used. The \$40 estimate was determined by dividing total overhead costs for the 9 months by total labor-hours.

Month	Labor-Hours	Overhead Costs
April	1,400	\$65,000
May	1,800	71,000
June	2,100	73,000
July	2,200	76,000
August	1,650	67,000
September	1,725	68,000
October	1,500	66,500
November	1,200	60,000
December	1,900	72,500

Required : (24%)

- (1) Use the high-low method to compute the cost function. (Overhead Costs=a+b Labor-Hours)
- (2) Lucy Hall has been asked to prepare a bid for a 20-child birthday party to be given next month. Determine the minimum bid price.
- (3) The company charges \$40 per person to participants of the event. The company hosted a total of 120 parties, with a cumulative attendance of 3,000 people. Compute the break-even point in sales dollars, margin of safety (% of sales) and the degree of operating leverage for the current year.
- (4) If sales decrease by 20%, by what percentage will the net profit decrease?

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7. Rosman Company has an opportunity to pursue a capital budgeting project with a five-year time horizon. After careful study, Rosman estimated the following costs and revenues for the project:

Cost of new equipment	\$420,000
Sale of old equipment (Book value = \$100,000)	\$ 80,000
Pre-tax annual operating cash inflows	\$135,000
Working capital needed	\$ 65,000
Equipment maintenance in each of Years 3 and 4	\$ 20,000

The new piece of equipment mentioned above has a useful life of five years and zero salvage value. The old piece of equipment mentioned above would be sold at the beginning of the project. Rosman uses the straight-line depreciation method. The company's tax rate is 30% and its after-tax cost of capital is 12%. When the project concludes in five years the working capital will be released for investment elsewhere within the company. Assume all cash flows occur at year-end except for net initial investment amounts.

Required : (21%)

- (1) What is the payback period for this proposal?
- (2) What is accrual accounting rate of return based on net initial investment?
- (3) Compute the net present value of this investment opportunity. Round all dollar amounts to the nearest whole dollar. Would you recommend that the contract be accepted?