

國立臺北大學 111 學年度碩士班一般入學考試試題

系(所)組別：會計學系

科目：成本與管理會計學

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1. Answer each of the following independent questions.

- (1) STARK bought a 2,000-acre land for \$8,215,300 and divided it into 200 equal size lots. As the lots are sold, they are cleared at an average cost of \$5,210. Storm drains and driveways are installed at an average cost of \$8,000 per site. Sales commissions are 10% of selling price. Administrative costs are \$850,000 per year. The average selling price was \$160,000 per lot during 2019 when 50 lots were sold. During 2020, STARK bought another 2,000-acre land and developed it exactly the same way. Lot sales in 2020 totaled 300 with an average selling price of \$160,000. All costs were the same as in 2019. Compute the operating income for both years using both absorption and variable costing methods (Show computations). Explain why operating income is (or not) the same under the two costing methods in 2019 and 2020, respectively. (8%)
- (2) HAWKEYE sells hot dogs for \$1.35. Variable costs are \$1.05 per unit with fixed production costs of \$90,000 per month at a level of 400,000 units. Fixed administrative costs total \$30,000. Sales average 400,000 units per month, with planned production of 400,000 hot dogs. What are breakeven unit sales under absorption costing if average sales are 498,000 and planned production is changed to 500,000? Show computations. (5%)
- (3) WANDA orders most of its items in lot sizes of 10 units. Average annual demand per side of beef is 720 units per year. Ordering costs are \$25 per order with an average purchasing price of \$100. Annual inventory carrying costs are estimated to be 40% of the unit cost. Compute the annual cost savings if the shop changes from an order size of 10 units to the economic order quantity. Show computations. (5%)

2. NTPU uses a process-costing system. For March, the company had the following activities:

Beginning work-in-process inventory (1/3 complete)	7,200 units
Units placed in production	28,800 units
Good units completed	21,600 units
Ending work-in-process inventory	12,000 units
Cost of beginning work in process	\$6,000
Direct material costs, current	\$21,600
Conversion costs, current	\$14,400

Direct materials are placed into production at the beginning of the process. All spoilage is normal and is detected at the end of the process. Ending work-in-process is 60% completed as to conversion.

Required:

- (1) Prepare a production cost worksheet using the FIFO method. (12%)
- (2) "In job costing, the costs of normal spoilage that occur while a specific job is being done are charged to the specific job." Do you agree? Explain. (5%)
3. APPLE is in need of a microcomputer network for its staff. The company uses straight-line depreciation for all capital assets. Annual required rate of return is 14%. The company has received three proposals, with related facts as follows:

	Proposal A	Proposal B	Proposal C
Initial investment in equipment	\$90,000	\$90,000	\$90,000
Annual cash increase in operations:			
Year 1	80,000	45,000	90,000
Year 2	10,000	45,000	0
Year 3	45,000	45,000	0
Salvage value	0	0	0
Estimated life	3 years	3 years	1 year

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Required:

Compute the payback period, net present value, and accrual accounting rate of return with initial investment, for each proposal. Show computations. Rank each proposal 1, 2, and 3 using each method separately. Which proposal is best? Why? (15%)

4. Taipei Company manufactures and sells product A. In 2019, it reported the following:

Units produced and sold	3,200
Investment	\$2,400,000
Markup percentage on full cost	8%
Rate of return on investment	12%
Variable cost per unit	\$500

Required:

- (1) What was the full cost per unit? What was the selling price? (12%)
- (2) Taipei is considering increasing the annual spending on advertising by \$175,000. The managers believe that the investment will translate into 10% increase in unit sales. Should Taipei make the investment? Show your calculations. (8%)
- (3) In 2020, Taipei believes that it will only be able to sell 2,900 units at the price calculated in requirement (1). Managers have identified \$125,000 in fixed cost that can be eliminated. If Taipei wants to maintain at an 8% markup on full cost, what is the target variable cost per unit? (10%)

5. AB Company is considering replacement of its old machine with a new, more cost-saving one. Information related to the old and new machines follows:

Original cost---old machine	\$60,000
Book value---old machine	\$50,000
Current market value---old machine	\$42,000
Annual operating cost---old machine	\$14,000
Purchase price---new machine	\$75,000
Installation cost---new machine	\$2,000
Annual operating cost---new machine	\$6,000

The old machine had been purchased a year ago. AB estimates that either machine has a remaining useful life of 5 years. At the end of 5 years, either machine would have a salvage value of zero.

Ignore the effect of income taxes and the time value of money.

Required:

- (1) Should AB purchase the new machine? Show your calculations. (10%)
- (2) Is there any conflict between the decision model and the incentives of the manager who has purchased the old machine and is considering replacing it a year later? (5%)
- (3) At what purchase price would AB be indifferent between purchasing the new machine and continuing to use the old machine? (5%)

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