

國立臺北大學 113 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, and show your computations if any. (20%)

- (1) A company is considering buying a product at \$1,500 per unit, and the in-house manufacturing of the same product is \$1,700. The fixed cost per unit is \$1,300 and it is included in the \$1700 in-house product manufacturing cost. What should the company do in this scenario?
- (2) KAMALA currently sells Sushi. During a typical month, KAMALA reports a profit of \$9,000 with sales of \$50,000, fixed costs of \$40,000, and variable costs of \$0.5 per Sushi. The company plans to start selling tacos for \$3 per unit. Tacos will have a variable cost of \$0.72 and new equipment and personnel to produce tacos will increase monthly fixed costs by \$8,007. Initial sales of tacos should total 5,000 units. Most of the taco sales are anticipated to come from current Sushi purchasers, therefore, monthly sales of Sushi are expected to decline to \$20,000. After the first year of taco sales, KAMALA believes that Sushi sales will increase to \$33,750 a month and taco sales will increase to 7,500 units a month. KAMALA expects a constant sales mix of 1 Sushi and 2 units of tacos. How many Sushi and taco should be sold monthly during the first year of taco sales in order to breakeven?
- (3) AQUAMAN sells eye drops for \$30. Variable costs are \$5 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 eye drops. What are breakeven unit sales under absorption costing if average sales are 498,000 and planned production is changed to 500,000?
- (4) NTPU makes laptops. The fixed overhead costs for 2024 total \$800,000. The company uses direct labor-hours for fixed overhead allocation and anticipates 200,000 hours during the year for 400,000 units. An equal number of units are budgeted for each month. During March, 32,000 laptops were produced and \$72,000 was spent on fixed overhead. Determine the production-volume overhead variance for March, and indicate whether it is favorable or unfavorable.

2. Taipei Company produces closets 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

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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%)

- (1) Prepare a production cost worksheet that summarizes total costs to account for and assign these costs to units completed and transferred out (including normal spoilage), to abnormal spoilage, and to units in ending work in process inventory for August.
- (2) How might the Chief Executive Officer of Taipei Company manipulate spoilage if he wants to show better operating income performance for August?

3. DUME Company produces chairs and has determined the following direct cost categories and budgeted amounts:

<u>Category</u>	<u>Standard Inputs for 1 output</u>	<u>Standard Cost per input</u>
Direct Materials	1	\$7.5
Direct Labor	0.3	\$9
Direct Marketing	0.5	\$3

Actual performance for the company is shown below:

Actual output: (in units)	<u>4,000</u>
Direct Materials:	
Materials costs	\$30,225
Input purchased and used	3,900
Actual price per input	\$7.75
Direct Manufacturing Labor:	
Labor costs	\$11,470
Labor-hours of input	1,240
Actual price per hour	\$9.25
Direct Marketing Labor:	
Labor costs	\$5,880
Labor-hours of input	2,100
Actual price per hour	\$2.8

Required: (15%)

- (1) What is the price variance of the direct materials and the efficiency variance for direct materials? Show your computations and indicate whether it is favorable or unfavorable.
- (2) What is the price variance of the direct manufacturing labor and the direct marketing labor, respectively? Show your computations and indicate whether it is favorable or unfavorable.
- (3) What are the efficiency variances for direct manufacturing labor and direct marketing labor, respectively? Show your computations and indicate whether it is favorable or unfavorable.
- (4) Give at least three good reasons why a favorable (unfavorable) price variance for direct materials might be reported.

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4. Taipei company sells 8,000 toys at the unit price \$2,000 each year. These toys are sold evenly throughout the year. Ordering costs are \$3,600 per order, and carrying costs are \$1,000 per unit per year.

Required:

- (1) What is the economic order quantity? (5%)
- (2) What are the total ordering costs and carrying costs per year under this quantity? (5%)
- (3) Suppose the manager predicts ordering costs to be \$2,500 instead of the actual \$3,600 when calculating the order quantity, what is the cost of the prediction error? (5%)

5. Sanshia company manufactures various picture frames. Each new employee takes 100 minutes to make the first unit and 80 minutes to make the second.

Required:

- (1) What is the learning-curve percentage, assuming the cumulative average time method? (5%)
- (2) Demonstrate the time needed to make the seventh unit using an equation, assuming the cumulative average time method. (5%)
- (3) What is the learning-curve percentage, assuming the incremental unit-time method? (5%)

6. Minsheng company's investment center has the following data:

Return on sales 9%

Return on investment 36%

Residual income \$62,000

Mingsheng's required rate of return is 5%

Required:

Compute the following numbers for the investment center:

- (1) Sales (5%)
- (2) operating income (5%)
- (3) investment (5%)
- (4) investment turnover (5%)

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