

考試科目	成本與管理會計學	系所別	會計研究所會計組	考試時間	2月6日(二)第三節
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**第一題 (6分)**

- Which of the following statements is true of variable overhead costs?
  - Fixed overhead costs always have unused capacity.
  - Fixed overhead costs have efficiency variance.
  - Variable overhead costs have no spending variance.
  - Variable overhead costs have no production-volume variance.
- B Products Inc. planned to use \$36 of material per unit but actually used \$34 of material per unit and planned to make 1,520 units but actually made 1,320 units. The flexible-budget variance for materials is:
  - \$2,640 favorable
  - \$7,200 unfavorable
  - \$6,800 unfavorable
  - \$3,040 favorable
- Which of the following is referred to as the bottom-up aspect of the budgeting process?
  - lower-level managers setting their individual targets that aggregate to be the company-wide target
  - senior managers consulting middle- and lower-level managers to investigate any deviations from the budget
  - lower-level managers implementing the budgets with senior managers monitoring progress and investigating deviations
  - lower-level managers providing inputs to the budgeting process based on their specialized knowledge and familiarity of the operation

**第二題 (10分)**

UCC manufactures bottles in its Processing Department. At the initial production cycle, direct materials are introduced and should be consolidated into individual kits for each unit. Conversion costs are incurred evenly throughout the production cycle. Before inspection, some units are spoiled due to undetectable materials defects. Inspection occurs when units are 60% converted. Spoiled units generally constitute 4% of the good units. UCC accounts collect data for December 2022 are as follows:

WIP, beginning inventory 12/1/2022	22,800	units
Direct materials (100% complete)		
Conversion costs (75% complete)		
Started during December	76,100	units
Completed and transferred out 12/31/2022	72,500	units

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WIP, ending inventory 12/31/2022                      18,900      units

Direct materials (100% complete)

Conversion costs (65% complete)

Costs for December:

WIP, beginning inventory:

Direct materials      \$142,430

Conversion costs      76,900

Direct materials added      223,400

Conversion costs added      280,240

**Required:**

- (1) What is the total amount of direct materials and conversion costs assigned to ending work in process using the weighted-average process-costing method?
- (2) UCC sold 7,000 units in December 2022. What is the impact of costs allocated to abnormal spoilage using the weighted-average process-costing method on operating income?

**第三題 (10分)**

Top managers in Bata, Inc., require varying degrees of managerial accounting information. Because of the need to comply with the managers' requests, Helen, management accountant, need to compute different variances for manufacturing overhead each month. The information for the September overhead expenditures is as follows:

Budgeted output units	3,200 units
Budgeted fixed manufacturing overhead	\$20,000
Budgeted variable manufacturing overhead	\$5.5 per direct labor hour
Budgeted direct manufacturing labor hours	1 hour 48 minutes per unit
Fixed manufacturing costs incurred	\$26,000
Direct manufacturing labor hours used	7,200
Variable manufacturing costs incurred	\$35,660
Actual units manufactured	3,400

**Required:**

- (1) Helen compute spending variance, efficiency variance, and production-volume variance for the manufacturing vice president. (6%)
- (2) Although Bata, Inc., is a small company, Helen still need to analyses the possible reasons for spending variance, efficiency variance, and production-volume variance. In the analysis report, she indicates the management accounting team report 3-variance analysis rather than 4-variance analysis because of less value in doing the additional measurements required for 4-variance analyses. Do you agree their options? Why? (4%)

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**第四題 (8分)**

LL Corporation has the budgeted unit sales for the next three-month period. The budgeted sales for March, April, and May are 90,000, 120,000, and 210,000 units, respectively. There were 30,000 units of finished goods in inventory at the beginning of March. Plans are to have an inventory of finished products that equal 20% of the unit sales for the next month. Five pounds of materials are required for each unit produced. Each pound of material costs \$8. Inventory levels for materials are equal to 30% of the needs for the next month. Materials inventory on March 1 was 15,000 pounds.

**Required:**

- (1) Compute the budgeted production in units for April.
- (2) Prepare a purchases budget for total material purchases and give total purchases in both pounds and dollars for April.

**第五題 (18分)**

Pearl International Company, a family-owned company headquartered in Taiwan, develops and produces starch powder from high quality sweet potatoes and cassavas since 1970s. The company offers various types of starch, including sweet potato starch, tapioca starch, modified starch, mixed starch, etc. The company offers the promise that its starch is traditionally processed and additive-free, ensuring a better, worry-free ingredient that complements many dishes or desserts. Pearl International has two large subsidiaries, the Starch Division and the Tapioca Division. The Starch Division, located in rural Taipei with Plant No. 1, has been producing high quality starch for 50 years. It employs traditional and professional processing techniques, encompassing cleaning, grinding, filtering, condensation, and drying.

The Tapioca Division owns a lab and a Tapioca Pearls factory (Plant No. 2) next to the Starch Factory (Plant No. 1) and was established in the 2000s when upscale bubble tea shops and shaved ice stores became increasingly popular in Taiwan. The Division has developed and launched several innovative tapioca improvers that provide specific handling and taste characteristics to the tapioca pearls products in an attempt to escape the risk of commoditization of the starch market. Tapioca Starch from the Starch Division is the raw material needed by Tapioca Division to produce high-quality Tapioca Pearls products with different syrup flavors for bubble tea stores, hand shaken drink shops, shaved ice stores, restaurants, etc. Tapioca Division's managers believe they can sell one million kilograms of Tapioca Pearls products per year, which is less than full capacity. Following are Tapioca Division's expected revenues and costs for the Tapioca Plant:

	<u>Per KG</u>
Selling Price	\$ 30
Cost: Tapioca Starch (to be purchased from Starch Division)	?
Variable Production Costs	3
Fixed Production Costs	5

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Starch Division can operate at full capacity and sell all of the starch it produces. Following are Starch Division's expected revenues and costs for the production of regular starch:

	<u>Per KG</u>
Selling Price	\$ 16
Cost: Sweet Potatoes or Cassavas	6
Variable Production Costs	2
Fixed Production Costs	7

For every kilogram of Tapioca Starch that the Starch Division produces, it will forgo selling a kilogram of regular starch. However, one million kilograms per year would be only a small portion of total volume at the factory. Following are Starch Division's expected revenues and costs for the production of Tapioca Starch:

	<u>Per KG</u>
Selling Price (to Tapioca Division)	\$ ?
Cost: Cassavas	6
Variable Production Costs	4
Fixed Production Costs	9

**Required:**

The management would like to know the answers to the following questions. Please provide your reasoning and **double underline** your final answers:

- (1) On a company-wide bases, should Pearl International produce Tapioca Pearls products this year? Why or why not?
- (2) For short-term decisions, what is the maximum price that Tapioca Division's managers would be willing to pay for Tapioca Starch? Why?
- (3) Would Tapioca Division's managers be willing to pay the maximum transfer price calculated in (B)? Why or why not?
- (4) For short-term decisions, what is the minimum price that Starch Division's managers would be willing to receive for Tapioca Starch? Why?
- (5) Would Starch Division's managers be willing to receive the minimum transfer price calculated in part (D)? Why or why not?
- (6) What transfer price might be fair to the managers of both subsidiaries? Explain.



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**第六題 (15分)**

As Taiwanese bubble tea and cuisine gain popularity worldwide, the company has gradually built a global presence and established 20 company-owned subsidiaries overseas responsible for selling the company's products worldwide. The parent company in Taiwan takes care of manufacturing, R&D, and corporate overhead services, and is responsible for sales in Taiwan. The 20 subsidiaries overseas are responsible for selling and marketing the company's products in their own regions. The subsidiaries are organized as separate legal entities and managed as profit centers. Subsidiaries are divisions led by regional managers, who are responsible for the earnings before interest and taxes (EBIT) of their division. Their annual bonus depends on the achievement of their EBIT objective. All internal products deliveries to the overseas subsidiaries are invoiced by the parent company based on a standard manufacturing costs plus a profit margin of 50%. The standard manufacturing cost is a full cost and includes production costs and corporate manufacturing overhead costs. The management believes that the profitability of their products was mainly determined by the powerful innovation of the parent company and the transfer prices were part of the corporate tax policies. In determining the selling price charged to the end customer, the subsidiaries can add a local profit margin to the transfer price. A few years ago, new competitors from China entered the market and rivalry among competitors also increased, which resulted in enhanced pressure on prices. In many regions, managers were facing market prices that were even below the internal transfer price. The managers of the subsidiaries overseas complained that the transfer prices were too high and unfair. Bihn Chen, the regional manager in Southwest Asia, proposed a plan to source his products with local and cheaper suppliers. At the same time, he decided to no longer buy some of the products internally and proposed to invest in a local production line of starch and tapioca pearls products. After meeting with Bihn Chen, the CEO of Pearl International praised Bihn's entrepreneurship, but would like to give the idea more thoughts.

**Required:**

Write a memo to the CEO addressing the following issues:

- (1) Describe the dysfunctions of the existing responsibility center structure and transfer pricing system and outline your suggested changes.
- (2) Do you believe the CEO should accept Bihn Chen's proposal and finance his investment project? Outline the factors that should be considered.

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**第七題 (33分)**

How to integrate AI with management accounting has become an important management issue. Please answer the following questions:

- (1) How has AI impacted the role of management accountants in strategic decision-making within organizations? (6 分)
- (2) Evaluate the role of AI-powered analytics in improving performance measurement and key performance indicator (KPI) tracking within management accounting. (6 分)
- (3) What potential benefits does AI integration offer for management accounting? (6 分)
- (4) What challenges exist currently in effectively implementing AI-based tools in management accounting? (7 分)
- (5) Assess the implications of AI for talent development and skill requirements in the field of management accounting. How should educational programs adapt to prepare professionals for this evolving landscape? (8 分)

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- 一、作答於試題上者，不予計分。
- 二、試題請隨卷繳交。