一、選擇題 **(15 points, 3 points each): Choose one best answer for the following questions.** ※ 注意：請於試卷上「選擇題作答區」依序作答。

1、Gibson Manufacturing is a small textile manufacturer using machine-hours as the single indirect-cost rate to allocate manufacturing overhead costs to the various jobs contracted during the year. The following estimates are provided for the coming year for the company and for the Winfield High School band jacket job.

	Company	Winfield High School
Job		
Direct materials	$40,000	$1,000
Direct labor	$10,000	$200
Manufacturing overhead costs	$30,000	
Machine-hours	100,000 mh	900 mh

What is the bid price for the Winfield High School job if the company uses a 40% markup of total manufacturing costs?

a. $2,310
b. $588
c. $1,680
d. $2,058

2、Roberson Corporation manufactured 30,000 ice chests during September. The overhead cost-allocation base is $11.25 per machine-hour. The following variable overhead data pertain to September.

	Actual	Budgeted
Production	30,000 units	24,000 units
Machine-hours	15,000 hours	10,800 hours
Variable overhead cost per machine-hour:	$11.00	$11.25

What is the variable overhead efficiency variance?

a. $3,750 favorable
b. $16,875 unfavorable
c. $13,125 unfavorable
d. $30,375 unfavorable

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3、Ballard's Glass Company has a variable demand. Historically, its demand has ranged from 10 to 20 windows per day with an average of 15. John Ballard works eight hours a day, five days a week. Each order is one window and each window takes 26 minutes.

What is the cycle time for an order?

a. 26 minutes per window
b. 56.4 minutes per window
c. 82.3 minutes per window
d. 520 minutes per day

4、Bugos Company makes a household appliance with model number XX300. The goal for 20x4 is to reduce direct materials usage per unit. No defective units are currently produced. Manufacturing conversion costs depend on production capacity defined in terms of XX300 units that can be produced. The industry market size for appliances increased 5% from 20x3 to 20x4. The following additional data are available for 20x3 and 20x4:

	20x3	20x4
Units of XX300 produced and sold	10,000	10,500
Selling price	$100	$95
Direct materials (square feet)	30,000	29,000
Direct material costs per square foot	$10	$11
Manufacturing capacity for XX300 (units)	12,500	12,000
Total manufacturing conversion costs	$250,000	$240,000
Manufacturing conversion costs per unit of capacity	$20	$20

What is the revenue effect of the price-recovery component?

a. $2,500 U
b. $52,500 U
c. $47,500 F
d. $50,000 F

5、Waldorf Company has two sources of funds: long-term debt with a market and book value of $10 million issued at an interest rate of 12%, and equity capital that has a market value of $8 million (book value of $4 million). Waldorf Company has profit centers in the following locations with the following operating incomes, total assets, and total liabilities. The cost of equity capital is 12%, while the tax rate is 25%.

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	Operating Income	Assets	Current Liabilities
St. Louis	$ 960,000	$ 4,000,000	$ 200,000
Cedar Rapids	$1,200,000	$ 8,000,000	$ 600,000
Wichita	$2,040,000	$12,000,000	$1,200,000

What is the EVA for St. Louis?

a. $255,740
b. $327,460
c. $392,540
d. $720,000

二、計算題 (85 points): **Show all computation procedures to get partial credits; correct answers without supporting computation will receive NO points.**

※ 注意：請於試卷上「非選擇題作答區」依序作答，並應註明作答之大題及小題題號。

1.(15 Points)

假設(1)本期投入生產單位為80,000

(2)期初在製品數量為20,000，完工比率為80%

(3)期末在製品數量為40,000，完工比率為60%

(4)本期製成品總數量(含期初在製品完成)共為50,000

(5)正常損壞品為通過檢驗點數量之10%

(6)直接材料於生產一開始全部投入；但加工成本於生產過程均勻發生

(7)檢驗點設在製程的40%

(8)公司使用weighted-average method.

試依上述假設資料計算:

(1)約當產量 (10%)

(2)說明正常損壞成本如何分攤 (5%)

2. (20 Points)

Pet Corporation uses the following estimates for applying material acquisition costs:

Annual estimated Purchasing Department costs……$ 55,863,000

Annual estimated Inspection Department costs……$ 31,035,000

Annual estimated Receiving Department costs……$ 1,727,000

Annual estimated direct materials purchases……$620,700,000

Estimated items to be received……550,000

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The company applies the material handling costs of Purchasing and Inspection departments on the basis of the dollar value of materials purchased and the Receiving Department costs on the basis of items received.

Required:

Using the following actual data for the period, which have been recorded, prepare journal entries to close the balances of the material acquisition ledger accounts to Cost of Goods Sold.

Direct materials purchased	$625,000,000
Purchase Department cost	$ 56,274,000
Inspection Department cost	$ 31,236,000
Receiving Department cost	$ 1,640,000
Items received	545,500

3. (15 points)

福偉公司已實施品質成本制度，下述爲3月份所發生與品質相關的成本：

抱怨處理	$30,000
機器因品質問題閒置	400
測試器材折舊費用	1,000
報廢品成本	1,600
產品退回與折讓	70,000
保證期間維修成本	130,000
出貨檢驗	6,000
製程檢驗	2,000
TQM活動成本	3,000
供應商評估成本	2,000
重製成本	10,000
製程設計	1,000

此外，福偉公司3月份的銷貨額爲 $2,000,000。 試問：

(1) 若依品質會計對品質成本之四項分類，請分別計算各類品質成本佔銷貨額之百分比。 (10%)

(2) 由上述計算之各類品質成本百分比，說明其對品質管理有何涵意？ (5%)

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4. (15 points; 5 points for each question)

Apple Company uses a manufacturing costing system with one direct-cost category (direct materials) and three indirect-cost categories:

a. Setup and material-handling costs that vary with the number of batches
b. Manufacturing operation costs that vary with machine-hours
c. Costs of engineering changes that vary with the number of engineering changes made

In response to competitive pressures at the end of 2004 , Apple Company employed value engineering techniques to reduce manufacturing costs. Actual information for 2004 and 2005 are

	2004	2005
Setup and materials-handling cost per batch	$80,000	$75,000
Total manufacturing operating cost per machine-hour	$550	$500
Cost per engineering change	$120,000	$100,000

The management of Apple Company wants to evaluate whether value engineering has succeeded in reducing the target manufacturing cost per unit of one of its products , AS26 , by 10%. Actual results for 2004 and 2005 for AS26 are

	Actual Results for 2004	Actual Results for 2005
Units of AS26 produced	$35,000	$40,000
Direct material cost per unit of AS26	$12,000	$11,000
Total number of batches required to produce AS26	$700	$800
Total machine-hours required to produce AS26	$210,000	$220,000
Number of engineering changes made	$140	$100

(1) Calculate the manufacturing cost per unit of AS26 in 2004.
(2) Calculate the manufacturing cost per unit of AS26 in 2005.
(3) Did Apple Company achieve the target manufacturing cost per unit for AS26 in 2005 ? Explain.

5. (20 points; 10 points for each question)

Super Computer Corporation , manufactures and sells desktop computers . Super Computer Corporation has three divisions , each of which is located in a different country :

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a. China Division-manufacturing memory devices and keyboards
b. Korea Division-assembles desktop computers using internally manufactured parts and memory devices and keyboards from the China Division
c. U.S. Division-packages and distributes desktop computers

Each division is run as a profit center . The costs for the work done in each division for a single desktop computer are as follows :

China Division : Variable cost = 10,000 yuan
Fixed cost = 18,000 yuan
Korea Division : Variable cost = 3,600,000 won
Fixed cost = 4,800,000 won
U.S. Division : Variable cost =$1,000
Fixed cost =$2,000

- Chinese income tax rate on China Division's operating income : 40%
- Korean income tax rate on Korea Division's operating income :20%
- U.S. income tax rate on U.S. Division's operating income :30%

Each desktop computer is sold to retail outlets in the United States for $32,000 . Assume that the current foreign exchange rates are

8 yuan = $1 U.S.
1,200 won = $1 U.S.

Both the China and the Korea divisions sell part of their production under a private label . The China Division sells the comparable memory/keyboard package used in each Super Computer desktop computer to a Chinese manufacturer for 36,000 yuan . The Korea Division sells the comparable desktop computer to a Korean distributor for 15,600,000 won .

(1) Calculate the after-tax operating income per unit earned by each division under the following transfer-pricing methods : (a) market price , (b)200% of full costs , and (c) 300% of variable costs . (Income taxes are not included in the computation of the cost-based transfer prices .)
(2) Which transfer-pricing method(s) will maximize the net income per unit of Super Computer ? Explain?