

# 中原大學 113 學年度碩士班考試入學

113/2/1 10:40~12:10

誠實是我們珍視的美德，  
我們喜愛「拒絕作弊，堅守正直」的你！

會計學系

科目：成本及管理會計

(共 4 頁，第 1 頁)

可使用本校提供之計算機 (具備+、-、×、÷、%、√、MR、MC、M+、M- 運算功能)

不可使用計算機

----- (不可直接作答於試題，請作答於答案卷) -----

一、The C.H. Company manufactures specialty brass door handles at its B1 plant. The Company is considering implementing a JIT production system. The following are the estimated costs and benefits of JIT production:

- a. Annual additional tooling costs would be \$180,000.
- b. Average inventory would decline by 80% from the current level of \$2,000,000.
- c. Insurance, space, materials-handling, and setup costs, which currently total \$600,000 annually, would decline by 30%.
- d. The emphasis on quality inherent in JIT production would reduce rework costs by 40%. The company currently incurs \$400,000 in annual rework costs.
- e. Improved product quality under JIT production would enable the company to raise the price of its product by \$12 per unit. The company sells 30,000 units each year.

The required rate of return on inventory investment is 10% per year.

**Required: (20%)**

1. What is JIT? (4%)

2. Should the company adopt JIT production at the B1 plant? Show your calculations. (16%)

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科目：成本及管理會計

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二、D.W. Corporation is a manufacturer of computer accessories. It uses absorption costing based on standard costs and reports the following data for 2022:

Theoretical capacity	28,000	units
Practical capacity	22,400	units
Normal capacity utilization	20,000	units
Selling price	\$ 40	per unit
Beginning inventory	2,000	units
Production	22,000	units
Sales volume	23,000	units
Variable budgeted manufacturing cost	\$ 6	per unit
Total budgeted fixed manufacturing costs	\$280,000	
Total budgeted operating (nonmanuf.) costs (all fixed)	\$ 90,000	

There are no price, spending, or efficiency variances. Actual operating costs equal budgeted operating costs. The production-volume variance is written off to cost of goods sold. For each choice of denominator level, the budgeted production cost per unit is also the cost per unit of beginning inventory.

**Required: (30%)**

1. Compute the production-volume variance in 2022 when the denominator level is (a) theoretical capacity, (b) practical capacity, and (c) normal capacity utilization? (15%)
2. Compute the absorption costing-based income for D.W. Corporation using (a) theoretical capacity, (b) practical capacity, and (c) normal capacity utilization as the denominator levels. (15%)

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三、The S.O. Company buys crude vegetable oil. Refining this oil results in four products at the splitoff point: A, B, C, and D. Product C is fully processed by the splitoff point. Products A, B, and D can individually be further refined into Refined A, Refined B, and Refined D. In the most recent month (June), the output at the splitoff point was as follows:

- Product A, 338,000 gallons
- Product B, 104,000 gallons
- Product C, 52,000 gallons
- Product D, 26,000 gallons

The joint costs of purchasing and processing the crude vegetable oil were \$120,000. The company had no beginning or ending inventories. Sales of product C in June were \$24,000. Products A, B, and D were further refined and then sold. Data related to June are as follows:

	Separable Processing Costs to Make Refined Products	Revenues
Refined A	\$246,000	\$300,000
Refined B	100,000	160,000
Refined D	138,000	150,000

The company had the option of selling products A, B, and D at the splitoff point. This alternative would have yielded the following revenues for the June production:

- Product A, \$84,000
- Product B, \$72,000
- Product D, \$60,000

## Required:(30%)

1. Allocate the joint costs of \$120,000 to these products using the following methods: (a) Sales value at splitoff point, (b) Physical-measure (c) NRV (18%)
2. Could the company have increased its June operating income by making different decisions about the further processing of products A, B, or D? Show the effect on operating income of any changes you recommend. (12%)

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四、A.F. Company manufactures a single product. The company keeps the records of manufacturing activities from which the following information has been extracted:

	Level of Activity	
	March-Low	July-High
Number of unit produced	5,000	8,000
Cost of goods manufactured	\$ 141,000	\$230,000
Work in process inventory, beginning	\$ 8,000	\$34,000
Work in process inventory, ending	\$ 14,000	\$20,000
Direct materials cost per unit	\$ 5	\$5
Direct labor cost per unit	\$ 8	\$8
Total manufacturing overhead cost	?	?

The company's manufacturing overhead cost consists of variable and fixed cost. To have data available for planning, management wants to determine how much of the overhead cost is variable with unit produced and how much of it is fixed per month.

**Required: (20%)**

1. Compute the total manufacturing overhead cost for March and July. (10%)
2. Using the high-low method, estimate a cost formula for manufacturing overhead. (5%)
3. If 6,000 units are produced during a month, what would be the total manufacturing cost? (5%)