

※ 共五大題，試卷共四頁

1. 簡答題：(請按順序作答，每小題 7 分，4 小題共 28 分)

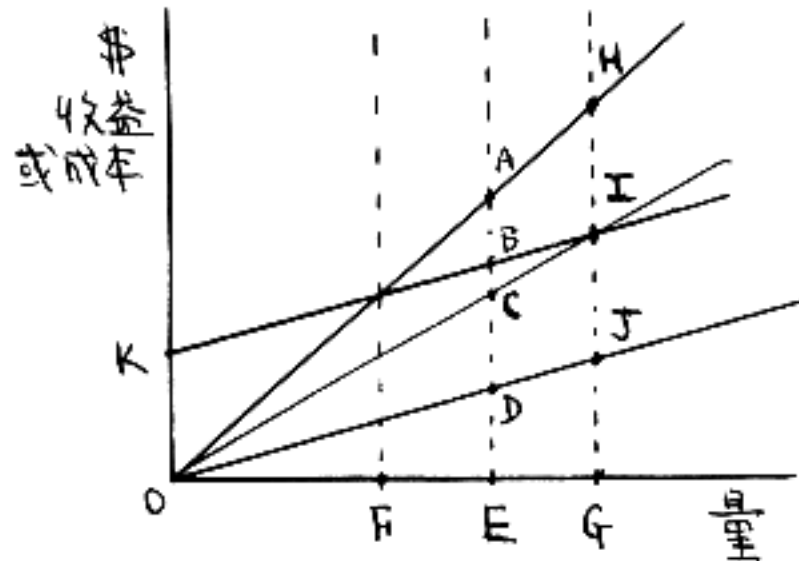
(1) 請解釋下面句子之意義

- a. The EOQ model trades off order costs vs. carrying costs.
- b. Safety stock computations trade off stockout costs vs. carrying costs.

(2) ABM(activity based management)能幫 top management 作好【1】management control【2】reengineering【3】special order 的決策，請簡單舉例說明之。

(3) 品質成本有 prevention costs, appraisal costs 及 failure costs，請簡述三者之間之相互關係，又你認為何種成本較為重要？

(4) 下圖 KI 是彈性預算的總成本線，OI 是標準成本線，OJ 線與 KI 線平行，而 OH 是益線。



請根據上圖回答下列問題：

- a. 當產量是 OE 時，預算的固定成本是多少？
- b. 當產量是 OE 時，預算的變動成本是多少？
- c. 當銷量是 OE 時，標準毛利是多少？
- d. 當銷量是 OE 時，預算毛利是多少？假設沒有存貨變動(inventory change)
- e. 正常產能(normal capacity)是多少？
- f. AB 與 HI 差異的原因是什麼？

2. 立景網路公司發展 Lookmeup.com 網站，2000 年度製造費用差異分析結果如下：

閒置產能差異	\$17,000 不利
效率差異	\$24,000 有利
變動製造費用 spending 差異	\$37,000 有利
固定製造費用 spending 差異	\$14,000 不利

假設實際製造費用\$420,000，其中固定製造費用是 220,000，請計算 applied overhead 中的固定製造費用，及變動製造費用各多少？ (本題 10 分)

(背面仍有題目,請繼續作答)

3. 友利公司有甲乙兩個生產部門，採加權平均分步成本制，2000年4月份乙部之資料如下：

期初在製品（材料 0%，加工成本 25%）	10,000 台
本期投入	70,000 台
轉製成品	50,000 台
期末在製品（加工成本 95%）	20,000 台
損壞品	10,000 台

4 月份投入之前部成本\$647,500，材料成本\$655,200，加工成本\$1,251,600，期初在製品中前部成本\$82,900，加工成本\$42,000，已知乙部在完工 90%時投入材料，而檢驗點在 80%時檢驗，正常損壞品是通過檢驗點的 10%，加工成本是比例投入。

請計算：

(1.) 轉製成品成本及期末在製品成本。

(2.) 如果改採 FIFO，請計算：

【1】轉製成品成本。

【2】期末在製品成本。

(本題 16 分)

4. 計算題（請按順序作答，每小題 6 分，5 小題共 30 分）

(1) Lane Co. produces main products Kul and Wu. The process also yields by-product Zef. Net realizable value of by-product Zef is subtracted from joint production cost of Kul and Wu. The following information pertains to production in July 2000 at a joint cost of \$54,000:

product	Units produced	Market value	Additional cost after split-off
Kul	1,000	\$40,000	\$0
Wu	1,500	35,000	0
Zef	500	7,000	3,000

If Lane uses the net realizable value method for allocating joint cost, how much of the joint cost should be allocated to product Kul?

(2) The Polly Co. wishes to determine the amount of safety stock that it should maintain for Product D that will result in the lowest cost. The following information is available:

Stockout cost	\$80 per occurrence
Carrying cost of safety stock	\$2 per unit
Number of purchase orders	5 per year

The available options open to Polly are as follows:

Units of safety stock	Probability of running out of safety stock
10	50%
20	40%
30	30%
40	20%
50	10%
55	5%

The number of units of safety stock that will result in the lowest cost are?

(3) Birney Co. is planning its advertising campaign for 2000 and has prepared the following budget data based on a zero advertising expenditure:

Normal plant capacity	200,000 units
Sales	150,000 units
Selling price	\$25.00 per unit
Variable manufacturing costs	\$15.00 per unit
Fixed costs:	
Manufacturing	\$800,000
Sales and administrative	\$700,000

An advertising agency claims that an aggressive advertising campaign would enable Birney to increase its unit sales by 20%. What is the maximum amount that Birney can pay for advertising and obtain an operating profit of \$200,000?

(4) Kipling Co. invested in an 8-year project. It is expected that the annual cash flow from the project, net of income taxes, will be \$20,000. Information on present value factors is as follows:

Present value of \$1 at 12% for eight periods	0.404
Present value of an ordinary annuity of \$1 at 12% for eight periods	4.968

Assuming that Kipling based its investment decision on an internal rate of return of 12%, how much did the project cost?

(5) The following standard costs pertain to a component part manufactured by Ashby Co.:

Direct materials	\$2
Direct manufacturing labor	5
Factory overhead	<u>20</u>
Standard cost per unit	<u>27</u>

Factory overhead is applied at \$1 per standard machine hour. Fixed capacity cost is 60% of applied factory overhead, and is not affected by any "make or buy" decision. It would cost \$25 per unit to buy the part from an outside supplier. In the decision to "make or buy," what is the total relevant unit manufacturing cost to be considered?

5. The Jump-Start Division (JSD) of Mason Industries manufactures go-carts and other recreational vehicles. JSD is considering building a new plant in 2001. The investment will cost \$2.5 million. The expected revenues and costs for the new plant in 2001 are:

Revenues	<u>\$2,400,000</u>
Variable costs	800,000
Fixed costs	<u>1,120,000</u>
Operating income	<u>\$480,000</u>

JSD's ROI in 2000 is 24% and its return on sales (ROS) is 19%. ROI is defined as operating income divided by total assets. The bonus of Maureen Grieco, the division manager of JSD, is based on division ROI.

REQUIRED

- (1) Explain why Grieco would be reluctant to build the new plant. Show your computations.
- (2) Suppose Mason Industries used RI to determine Grieco's bonus. Suppose further that the required rate of return on investment is 15%. Would Grieco be more willing to build the new plant? Explain.
- (3) Suppose Mason Industries used ROS to determine Grieco's bonus. Would Grieco be more willing to build the new plant? What are the advantages and disadvantages of using ROS to determine Grieco's bonus.
- (4) Indicate which of the following proposals do you think is a better way to evaluate Grieco's performance and why. **【a】** Grieco's compensation depends on the division's RI. **【b】** Grieco's performance is evaluated by benchmarking RI of other companies in the same industry and have comparable levels of investment. (本題 16 分)