# 國立中央大學110學年度碩士班考試入學試題

所別： 企業管理學系 碩士班 工商管理丁組(一般生) 共5頁 第1頁

科目： 管理會計學

本科考試可使用計算器，廠牌、功能不拘 ＊請在答案卷(卡)內作答

**[注意] 1.可不按題號順序作答，但須標明題號。**
**2.可用中文或英文作答。**
**3.計算題請列出必要之計算式，否則不予計分。**

一、Lane Company manufactures a single product that requires a great deal of hand labor. Overhead cost is applied on the basis of standard direct labor-hours. Variable manufacturing overhead should be $2 per standard direct labor-hour and fixed manufacturing overhead should be $480,000 per year.

The company's product requires 3 pounds of material that has a standard cost of $7 per pound and 1.5 hours of direct labor time that has a standard rate of $12 per hour.

The company planned to operate at a denominator activity level of 60,000 direct labor-hours and to produce 40,000 units of product during the most recent year. Actual activity and costs for the year were as follows:

Number of units produced ........................................................42,000

Actual direct labor-hours worked ..................................................65,000

Actual variable manufacturing overhead cost incurred..............$123,500

Actual fixed manufacturing overhead cost incurred ..................$483,000

*Required:* **(28%)**

1. Compute the predetermined overhead rate for the year. Break the rate down into variable and fixed elements. (5%)

2. Prepare a standard cost card for the company's product; show the details for all manufacturing costs on your standard cost card. (5%)

3. Compute the standard direct labor-hours allowed for the year's production. (6%)

4. Determine the reason for any underapplied or overapplied overhead for the year by computing the variable overhead rate and efficiency variances and the fixed overhead budget and volume variances. (6%)

5. Suppose the company had chosen 65,000 direct labor-hours as the denominator activity rather than 60,000 hours. State which, if any, of the variances computed in (4) above would have changed, and explain how the variance(s) would have changed. No computations are necessary. (6%)

**注意:背面有試題**

二、Herbal Care Corp., a distributor of herb-based sunscreens, is ready to begin its third quarter, in which peak sales occur. The company has requested a $40,000, 90-day loan from its bank to help meet cash requirements during the quarter. Since Herbal Care has experienced difficulty in paying off its loans in the past, the loan officer at the bank has asked the company to prepare a cash budget for the quarter. In response to this request, the following data have been assembled:

a. On July 1 , the beginning of the third quarter, the company will have a cash balance of $44,500.

b. Actual sales for the last two months and budgeted sales for the third quarter follow (all sales are on account):

| | |
|---|---|
| May (actual)…………………… | $250,000 |
| June (actual)…………………… | $300,000 |
| July (budgeted)……………… | $400,000 |
| August (budgeted)…………… | $600,000 |
| September (budgeted)……….. | $320,000 |

Past experience shows that 25% of a month's sales are collected in the month of sale, 70% in the month following sale, and 3% in the second month following sale. The reminder is uncollectible.

c. Budgeted merchandise purchases and budgeted expenses for the third quarter are given below:

| | July | August | September |
|---|---|---|---|
| Merchandise purchases | $240,000 | $350,000 | $175,000 |
| Salaries and wages | $45,000 | $50,000 | $40,000 |
| Advertising | $130,000 | $145,000 | $80,000 |
| Rent payments | $9,000 | $9,000 | $9,000 |
| Depreciation | $10,000 | $10,000 | $10,000 |

Merchandise purchases are paid in full during the month following purchase. Accounts payable for merchandise purchases on June 30, which will be paid during July, total $180,000.

d. Equipment costing $10,000 will be purchased for cash during July.

e. In preparing the cash budget, assume that the $40,000 loan will be made in July and repaid in September. Interest on the loan will total $1,200.

*Required:* **(24%)**

1. Prepare a schedule of expected cash collection for July, August, and September and for the quarter in total. (8%)
2. Prepare a cash budget, by month and in total, for the third quarter. (8%)
3. If the company needs a minimum cash balance of $20,000 to start each month, can the loan be required as planned? Explain. (8%)

三、Model X100 sells for $120 per unit whereas Model X200 offers advanced features and sells for $500 per unit. Management expects to sell 50,000 units of Model X100 and 5,000 units of Model X200 next year. The direct material cost per unit is $50 for Model X100 and $220 for Model X200. The company's total manufacturing overhead for the year is expected to be $1,995,000. A unit of Model X100 requires two direct labor-hours and a unit of Model X200 requires five direct labor-hours. The direct labor wage rate is $20 per hour.

*Required:* **(21%)**

1. The company currently applies manufacturing overhead to products using direct labor-hours as the allocation base. Using this traditional approach, compute the product margins for X100 and X200. (7%)

2. Management is considering an activity-based costing system and would like to know what impact this would have on product costs. Preliminary analysis suggests that under activity-based costing, a total of $1,000,000 in manufacturing overhead cost would be assigned to Model X100 and a total of $600,000 would be assigned to Model X200. In addition, a total of $150,000 in nonmanufacturing overhead would be applied to Model X100 and a total of $350,000 would be applied to Model X200. Using the activity-based costing approach, compute the product margins for X100 and X200. (7%)

3. Explain why the product margins computed in requirement (1) differ from those computed in requirement (2). (7%)

注意:背面有試題

四、Andretti Company has a single product called a Dak. The company normally produces and sells 60,000 Daks each year at a selling price of $32 per unit. The company's unit costs at this level of activity are given below:

| | | |
|---|---|---|
| Direct materials ............................... | $10.00 | |
| Direct labor. ..................................... | 4.50 | |
| Variable manufacturing overhead..... | 2.30 | |
| Fixed manufacturing overhead......... | 5.00 | ($300,000 total) |
| Variable selling expenses. .................. | 1.20 | |
| Fixed selling expenses......................... | 3.50 | ($210,000 total) |
| Total cost per unit........................ | $26.50 | |

A number of questions relating to the production and sale of Daks follow. Each question is independent.

*Required:* **(27%)**

1. Assume that Andretti Company has sufficient capacity to produce 90,000 Daks each year without any increase in fixed manufacturing overhead costs. The company could increase its sales by 25% above the present 60,000 units each year if it were willing to increase the fixed selling expenses by $80,000. Would the increased fixed selling expenses be justified? (5%)

2. Assume again that Andretti Company has sufficient capacity to produce 90,000 Daks each year. A customer in a foreign market wants to purchase 20,000 Daks. Import duties on the Daks would be $1.70 per unit, and costs for permits and licenses would be $9,000. The only selling costs that would be associated with the order would be $3.20 per unit shipping cost. Compute the per unit break-even price on this order. (5%)

3. The company has 1,000 Daks on hand that have some irregularities and are therefore considered to be “seconds.” Due to the irregularities, it will be impossible to sell these units at the normal price through regular distribution channels. What unit cost figure is relevant for setting a minimum selling price? Explain. (5%)

4. Due to a strike in its supplier's plant, Andretti Company is unable to purchase more material for the production of Daks. The strike is expected to last for two months.

注意:背面有試題

Andretti Company has enough material on hand to operate at 30% of normal levels for the two-month period. As an alternative, Andretti could close its plant down entirely for the two months. If the plant were closed, fixed manufacturing overhead costs would continue at 60% of their normal level during the two-month period and the fixed selling expenses would be reduced by 20%. What would be the impact on profits of closing the plant for the two-month period? (6%)

5. An outside manufacturer has offered to produce Daks and ship them directly to Andretti's customers. If Andretti Company accepts this offer, the facilities that it uses to produce Daks would be idle; however, fixed manufacturing overhead costs would be reduced by 75%. Because the outside manufacturer would pay for all shipping costs, the variable selling expenses would be only two-thirds of their present amount. Compute the unit cost that is relevant for comparison to the price quoted by the outside manufacturer. (6%)