

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：3

I. Multiple-Choice Questions (60%): Select the best answer for each question (3% for each question)

Use the following to answer questions 1-2:

Bugos Company makes a household appliance with model number XX600. The goal for 2008 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 XX600 units that can be produced. The industry market size for appliances increased 5% from 2007 to 2008. The following additional data are available for 2007 and 2008:

| | <u>2007</u> | <u>2008</u> |
|--|-------------|-------------|
| Units of XX600 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 XX600 (units) | 12,500 | 12,000 |
| Total conversion costs | \$250,000 | \$240,000 |
| Conversion costs per unit of capacity | \$20 | \$20 |

- What is the cost effect of the growth component for direct materials?
A) \$15,000 U ; B) \$10,000 U ; C) \$10,000 F ; D) \$16,500 F ; E) None of the above.
- What is the net effect on operating income as a result of the growth component?
A) Operating income increased due to increased market share.
B) Operating income decreased due to increased market share.
C) Operating income increased due to industry growth.
D) Operating income decreased due to industry growth.
E) None of the above.
- Stereo Goods is a distributor of videotapes. Video Mart is a local retail outlet which sells blank and recorded videos. Video Mart purchases tapes from Stereo Goods at \$5.00 per tape; tapes are shipped in packages of 25. Stereo Goods pays all incoming freight, and Video Mart does not inspect the tapes due to Stereo Goods' reputation for high quality. Annual demand is 104,000 tapes at a rate of 2,000 tapes per week. Video Mart earns 15% on its cash investments. The purchase-order lead time is one week. The following cost data are available :

Relevant ordering costs per purchase order \$94.50

Carrying costs per package per year:

Relevant insurance, materials handling,
breakage, etc., per year \$ 3.50

How many deliveries will be made during each time period?

A) 22.1 deliveries ; B) 26.0 deliveries ; C) 29.4 deliveries ;

D) 32.0 deliveries ; E) None of the above. (背面仍有題目,請繼續作答)

本試題是否可以使用計算機： 可使用， 不可使用 (請命題老師勾選)

考試日期：0302，節次：3

4. Mrs. Granberry is going to sell Christmas tree lights for \$20 a box. The lights cost Marsha \$5 a unit and any unsold lights can be returned for a full refund. She is planning to rent a booth at the upcoming Happy Holidays Convention, which offers three options:

- (1) paying a fixed fee of \$1,500,
- (2) paying a \$500 fee plus 10% of revenues made at the convention, or
- (3) paying 25% of revenues made at the convention.

Which of the following statements is FALSE?

- A) Her decision will determine the risk she faces.
 - B) Contribution margin will vary, depending upon the option chosen.
 - C) One of the options will allow Marsha to break even, even if she doesn't sell any lights.
 - D) Operating income will be the greatest for Option 3.
 - E) None of the above.
5. In a company with low operating leverage,
- A) fixed costs are high and variable costs are low.
 - B) large changes in sales volume result in small changes in net income.
 - C) there is a higher possibility of net loss than a higher-leveraged firm.
 - D) less risk is assumed than in a highly leveraged firm.
 - E) none of the above.

6. The Maxwell Company manufactures and sells a single product. Budgeted data follow:

| | |
|---------------------------------------|------------------|
| Forecasted annual sales volume | 120,000 units |
| Selling price per unit | \$25.00 |
| Variable expenses per unit: | |
| Raw materials | \$11.00 |
| Direct labor..... | 5.00 |
| Manufacturing overhead | 2.50 |
| Selling expenses..... | <u>1.30</u> |
| Total variable expenses per unit..... | <u>\$19.80</u> |
| Annual fixed expenses: | |
| Manufacturing overhead | \$192,000 |
| Selling and administrative | <u>276,000</u> |
| Total fixed expenses..... | <u>\$468,000</u> |

If Maxwell Company's direct labor costs increase 8 percent, what selling price per unit of product must it charge to maintain the same contribution margin ratio?

- A) \$25.51 ; B) \$27.00 ; C) \$25.40 ; D) \$26.64
 - E) None of the above.
7. Inacio Corporation uses the FIFO method in its process costing system. The first processing department, the Forming Department, started the month with 22,000 units in

本試題是否可以使用計算機： 可使用， 不可使用 (請命題老師勾選)

考試日期：0302，節次：3

its beginning work in process inventory that were 70% complete with respect to conversion costs. The conversion cost in this beginning work in process inventory was \$38,500. An additional 71,000 units were started into production during the month and 72,000 units were completed and transferred to the next processing department. There were 21,000 units in the ending work in process inventory of the Forming Department that were 40% complete with respect to conversion costs. A total of \$148,850 in conversion costs were incurred in the department during the month. What would be the cost per equivalent unit for conversion costs for the month on the Forming Department's production report? (Round off to three decimal places.)

- A) \$2.500 ; B) \$2.015 ; C) \$2.096 ; D) \$2.290 ; E) None of the above.

8. Rio Manufacturing Company uses a job order cost system. At the beginning of February, Rio only had one job in process, Job #594. The direct costs assigned to this job at that time were \$800 of materials and \$650 of labor. Job #594 was finished during February incurring additional direct costs of \$120 for materials and \$370 for labor. Job #595 was started and finished during February. The direct costs assigned to this job were \$310 for materials and \$190 for labor. Job #596 was started during February but was not finished by the end of the month. The direct costs assigned to this job were \$740 for materials and \$300 for labor. Rio applies manufacturing overhead to its products at a rate of 200% of direct labor cost. What is Rio's cost of goods manufactured for February?

- A) \$2,440 ; B) \$3,750 ; C) \$4,860 ; D) \$6,500 ; E) None of the above.

Use the following to answer questions 9-10:

Meade Nuptial Bakery makes very elaborate wedding cakes to order. The company has an activity-based costing system with three activity cost pools. The activity rate for the Size-Related activity cost pool is \$1.13 per guest. (The greater the number of guests, the larger the cake.) The activity rate for the Complexity-Related cost pool is \$43.52 per tier. (Cakes with more tiers are more complex.) Finally, the activity rate for the Order-Related activity cost pool is \$61.44 per order. (Each wedding involves one order for a cake.) The activity rates include the costs of raw ingredients such as flour, sugar, eggs, and shortening. The activity rates do not include the costs of purchased decorations such as miniature statues and wedding bells, which are accounted for separately.

Data concerning two recent orders appear below :

| | Ericson <u>Wedding</u> | Haupt <u>Wedding</u> |
|--|---------------------------|-------------------------|
| Number of reception guests..... | 60 | 162 |
| Number of tiers on the cake..... | 4 | 3 |
| Cost of purchased decorations for cake | \$16.89 | \$38.61 |

(背面仍有題目,請繼續作答)

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：3

9. Assuming that all of the costs listed above are avoidable costs in the event that an order is turned down, what amount would the company have to charge for the Ericson wedding cake to just break even?

A)\$61.44 ; B)\$387.45 ; C)\$16.89 ; D)\$320.21 ; E) None of the above.

10. Assuming that the company charges \$500.54 for the Haupt wedding cake, what would be the overall margin on the order?

A)\$86.87 ; B)\$413.67 ; C)\$148.31 ; D)\$125.48 ; E) None of the above.

11. MJ Department Store expects to generate the following sales figures for the next three months:

| | <u>July</u> | <u>August</u> | <u>September</u> |
|--------------------|-------------|---------------|------------------|
| Expected sales ... | \$480,000 | \$560,000 | \$600,000 |

MJ's gross profit rate is 45% of sales dollars. At the end of each month, MJ wants a merchandise inventory balance equal to 30% of the following month's expected sales, stated at cost. What dollar amount of merchandise inventory should MJ plan to purchase in August?

A)\$257,400 ; B)\$314,600 ; C)\$320,000 ; D)\$327,800 ; E) None of the above.

12. Which of the following standard cost variances would usually be least controllable by a production supervisor?

- A) Fixed overhead volume variance.
- B) Variable overhead efficiency variance.
- C) Direct labor efficiency variance.
- D) Materials usage (quantity) variance.
- E) None of the above.

13. Andress Footwear Corporation's flexible budget cost formula for supplies, a variable overhead cost, is \$2.17 per unit of output. The company's flexible budget performance report for last month showed a \$4,531 unfavorable variance for supplies. During that month, 19,700 units were produced. Budgeted activity for the month had been 19,400 units. The actual costs incurred for indirect materials must have been closest to:

A) \$2.17 ; B) \$2.63 ; C) \$2.67 ; D) \$2.40 ; E) None of the above.

14. Alapai Corporation has a standard cost system in which it applies manufacturing overhead to products on the basis of standard machine-hours (MHs). The company has provided the following data for the most recent month:

| | | |
|---|----------|--------|
| Budgeted level of activity..... | 7,000 | MHs |
| Actual level of activity..... | 7,200 | MHs |
| Cost formula for variable manufacturing overhead cost | \$9.40 | per MH |
| Budgeted fixed manufacturing overhead cost..... | \$40,000 | |
| Actual total variable manufacturing overhead..... | \$66,960 | |

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：3

Actual total fixed manufacturing overhead \$37,000

What was the total of the variable overhead spending and fixed overhead budget variances for the month?

- A) \$3,720 favorable ; B) \$2,280 unfavorable ; C) \$1,840 favorable ;
- D) \$1,880 unfavorable ; E) None of the above.

15. Three potential investment projects (A, B, and C) at Nit Corporation all require the same initial investment, have the same useful life (3 years), and have no expected salvage value. Expected net cash inflows from these three projects each year is as follows:

| | A | B | C |
|--------------|---------|---------|---------|
| Year 1 | \$1,000 | \$2,000 | \$3,000 |
| Year 2 | \$2,000 | \$2,000 | \$2,000 |
| Year 3 | \$3,000 | \$2,000 | \$1,000 |

What can be determined from the information provided above?

- A) The net present value of project C will be the highest.
 - B) The internal rate of return of projects A and C cannot be computed.
 - C) The net present value and the internal rate of return will be the same for all three projects.
 - D) Both A and B above.
 - E) None of the above.
16. When evaluating a project, the portion of the fixed corporate headquarters expense that would be allocated to the project should be:
- A) included as a cash outflow on an after-tax basis by multiplying the expense by one minus the tax rate.
 - B) included as a cash outflow on an after-tax basis by multiplying the expense by the tax rate.
 - C) included as a cash outflow on a before-tax basis.
 - D) ignored.
 - E) none of the above.
17. Otool Inc. is considering using stocks of an old raw material in a special project. The special project would require all 240 kilograms of the raw material that are in stock and that originally cost the company \$2,112 in total. If the company were to buy new supplies of this raw material on the open market, it would cost \$9.25 per kilogram. However, the company has no other use for this raw material and would sell it at the discounted price of \$8.35 per kilogram if it were not used in the special project. The sale of the raw material would involve delivery to the purchaser at a total cost of \$71.00 for all 240 kilograms. What is the relevant cost of the 240 kilograms of the raw material when deciding whether to proceed with the special project?

(背面仍有題目,請繼續作答)

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：3

- A) \$1,933 ; B) \$2,004 ; C) \$2,220 ; D) \$2,112 ; E) None of the above.
18. Which of the following is NOT a common approach used to set transfer prices?
A) market price ; B) variable cost ; C) negotiation ;
D) suboptimization ; E) none of the above.
19. Which of the following companies is following a policy with respect to the costs of service departments that is not recommended?
A) To charge operating departments with the depreciation of forklifts used at its central warehouse, Shalimar Electronics charges predetermined lump-sum amounts calculated on the basis of the long-term average use of the services provided by the warehouse to the various segments.
B) Manhattan Electronics uses the sales revenue of its various divisions to allocate costs connected with the upkeep of its headquarters building.
C) Rainier Industrial does not allow its service departments to pass on the costs of their inefficiencies to the operating departments.
D) Golkonda Refinery separately allocates fixed and variable costs incurred by its service departments to its operating departments.
E) None of the above.
20. Devlin Company has two divisions, C and D. The overall company contribution margin ratio is 30%, with sales in the two divisions totaling \$500,000. If variable expenses are \$300,000 in Division C, and if Division C's contribution margin ratio is 25%, then sales in Division D must be:
A) \$50,000 ; B) \$100,000 ; C) \$150,000 ; D) \$200,000 ; E) None of the above.

II. (15%) Metropolitan Manufacturing expects to spend \$400,000 in 2008 in appraisal costs if it does not change its incoming materials inspection method. If it decides to implement a new receiving method, it will save \$40,000 in fixed appraisal costs and variable costs of \$0.40 per unit of finished product. The new method involves \$60,000 in training costs and an additional \$160,000 in annual equipment rental. It takes two units of material for each finished product.

Internal failure costs average \$80 per failed unit of finished goods. During 2007, 5% of all completed items had to be reworked. External failure costs average \$200 per failed unit. The company's average external failures are 1% of units sold. The company carries no ending inventories, because all jobs are on a per order basis and a just-in-time inventory ordering method is used.

Required: (Show the computations)

1. What is the net effect on appraisal costs for 2008, assuming the new receiving method is implemented and that 800,000 material units are received? (5%)

本試題是否可以使用計算機： 可使用， 不可使用（請命題老師勾選）

考試日期：0302，節次：3

2. How much will internal failure costs change, assuming 800,000 units of materials are received and that the new receiving method reduces the amount of unacceptable product units in the manufacturing process by 10%? (5%)
3. How much will external failure costs change assuming 800,000 units of materials are received and that product failures with customers are cut in half with the new receiving method? (5%)

III. (25%)

"These statements can't be right," said Ben Yoder, president of Rayco, Inc. "Our sales in the second quarter were up by 25% over the first quarter, yet these income statements show a precipitous drop in net operating income for the second quarter. Those accounting people have fouled something up." Mr. Yoder was referring to the following statements (absorption costing basis):

| RAYCO, INC. | | | |
|---|----------|----------------------|-----------------------|
| Income Statements | | | |
| For the First Two Quarters | | | |
| | | <u>First Quarter</u> | <u>Second Quarter</u> |
| Sales | | \$480,000 | \$600,000 |
| Less cost of goods sold: | | | |
| Beginning inventory..... | \$80,000 | | \$140,000 |
| Add: cost of goods manufactured | 300,000 | | 180,000 |
| Goods available for sale..... | 380,000 | | 320,000 |
| Less: ending inventory..... | 140,000 | | 20,000 |
| Cost of goods sold..... | 240,000 | | 300,000 |
| Add: underapplied overhead | — | 240,000 | 72,000 |
| | | <u>240,000</u> | <u>372,000</u> |
| Gross margin..... | | 240,000 | 228,000 |
| Less: selling and administrative expenses | | 200,000 | 215,000 |
| Net operating income..... | | <u>\$40,000</u> | <u>\$13,000</u> |

After studying the statements briefly, Mr. Yoder called in the controller to see if the mistake in the second quarter could be located before the figures were released to the press. The controller stated, "I'm sorry to say that those figures are correct, Ben. I agree that sales went up during the second quarter, but the problem is in production. You see, we budgeted to produce 15,000 units each quarter, but a strike on the west coast among some of our suppliers forced us to cut production in the second quarter back to only 9,000 units. That's what caused the drop in net operating income."

(背面仍有題目,請繼續作答)

Mr. Yoder was confused by the controller's explanation. He replied, "This doesn't make sense. I ask you to explain why net operation income dropped when sales went up and you talk about production! So what if we had to cut back production? We still were able to increase sales by 25%. If sales go up, then net operating income should go up. If your statements can't show a simple thing like that, then it's time for some changes in your department!"

Budgeted production and sales for the year, along with actual production and sales for the first two quarters, are given below:

| | | Quarter | | | |
|-----------------------------|-------|---------|--------|--------|--------|
| | | First | Second | Third | Fourth |
| Budgeted Sales (units) | | 12,000 | 15,000 | 15,000 | 18,000 |
| Actual Sales (Units) | | 12,000 | 15,000 | — | — |
| Budgeted production (units) | | 15,000 | 15,000 | 15,000 | 15,000 |
| Actual production (units) | | 15,000 | 9,000 | — | — |

The company's plant is heavily automated, and fixed manufacturing overhead amounts to \$180,000 each quarter. Variable manufacturing costs are \$8 per unit. The fixed manufacturing overhead is applied to units of product at a rate of \$12 per unit (based on the budgeted production shown above). Any under- or overapplied overhead is closed directly to cost of goods sold for the quarter. The company had 4,000 units in inventory to start the first quarter and uses the FIFO inventory flow assumption. Variable selling and administrative expenses are \$5 per units.

Required:

1. Prepare a variable costing income statement for the **second** quarter using the contribution approach. (5%)
2. Reconcile the absorption costing and the variable costing net operating income figures for the **second** quarter. (Please show the computations of reconciliation in detail) (5%)
3. Assume that the company had introduced JIT (just -in-time) at the beginning of the second quarter (Sales and production during the first quarter remain the same). What would the company's net operating income (or loss) have been for the second quarter under absorption costing? Prepare an absorption costing income statement to support your answer. (15%)