

※ 考生請注意：本試題可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

一、選擇題 (60%，每一題3%)

1. Which of the following statements related to cost accounting and financial accounting is **TRUE**?
 - A) The primary users of cost accounting are the investors, whereas the primary users of financial accounting are the managers.
 - B) Cost accounting deals with product design, production, and marketing strategies, whereas financial accounting deals mainly with pricing of the products.
 - C) Cost accounting measures only the financial information related to the costs of acquiring fixed assets in an organization, whereas financial accounting measures financial and nonfinancial information of a company's business transactions. Thus, costing is part of both management and financial accounting systems.
 - D) Cost accounting measures information related to the costs of acquiring or using resources in an organization, whereas financial accounting measures a financial position of a company to investors, banks, and external parties.

2. When using a normal costing system, manufacturing overhead is allocated using the _____ manufacturing overhead rate and the _____ quantity of the allocation base.
 - A) budgeted; actual
 - B) budgeted; budgeted
 - C) actual; budgeted
 - D) actual; actual

3. Which of the following is **TRUE** with activity-based cost accounting?
 - A) In activity-based costing systems, limiting cost-allocation bases to only units of output strengthens the cause-and-effect relationship between the cost-allocation base and the costs in a cost pool.
 - B) Although using activity-based costing can guarantee more accurate costs, ABC system can only be used in manufacturing firms but cannot be used in merchandising firms.
 - C) Activity-based costing is more suited to companies with high product diversity than companies with single product line.
 - D) Using department indirect-cost rates to allocate costs to products results in similar information as activity-based cost rates if significant costs are incurred on different activities within a department and each activity has different cost driver and therefore cost-allocation base.

4. Which of the following statements related to process costing and job costing is most accurate?
- A) Job-costing systems separate costs into cost categories according to when costs are introduced into the process of manufacture.
 - B) Job costing includes materials, labor and overhead while process costing only considers conversion costs.
 - C) The principal difference between process costing and job costing is that in process costing an averaging process is used to compute the unit costs of products or services.
 - D) Job costing measures the variable cost of identical jobs while process costing measures the cost of identical products using average unit costs of materials and conversion costs, some of which are fixed costs.

5. Throne Corporation manufactures two models of office chairs, a standard and a deluxe model. The following activity and cost information has been compiled:

| <u>Product</u> | <u>Number of Setups</u> | <u>Number of Components</u> | <u>Number of Direct Labor Hours</u> |
|----------------|-------------------------|-----------------------------|-------------------------------------|
| Standard | 11 | 6 | 295 |
| Deluxe | 29 | 14 | 205 |
| Overhead costs | \$60,000 | \$58,900 | |

Number of setups and number of components are identified as activity-cost drivers for overhead. Assuming an activity-based costing system is used, what is the total amount of overhead costs assigned to the deluxe model?

- A) \$84,705
 - B) \$84,730
 - C) \$56,800
 - D) \$86,202
6. Which of the following is **TRUE** of just-in-time (JIT) production?
- A) a push-through system that manufactures finished goods for inventory on the basis of demand forecasts.
 - B) a push-through system in which each component in a production line is produced immediately as needed by the next step in the production line.
 - C) a demand-pull system in which each component in a production line is produced immediately as needed by the next step in the production line.
 - D) a demand-pull system that manufactures finished goods for inventory on the basis of demand forecasts.

7. The Holstein Company processes unprocessed milk up to the split-off point where two products, condensed milk and skim milk result. The following information was collected for the month of February:

| | | |
|------------------------------------|----------------|-----------------------------------|
| <i>Direct Materials processed:</i> | | 105,500 gallons (after shrinkage) |
| <i>Production:</i> | Condensed milk | 46,000 gallons |
| | Skim milk | 59,500 gallons |
| <i>Sales:</i> | Condensed milk | \$5.00 per gallon |
| | Skim milk | \$4.50 per gallon |

The costs of purchasing the of unprocessed milk and processing it up to the split-off point to yield a total of 105,500 gallons of saleable product was \$186,480. There were no inventory balances of either product. Condensed milk may be processed further to yield 45,000 gallons (the remainder is shrinkage) of a medicinal milk product, FeCa Plus, for an additional processing cost of \$4 per usable gallon. FeCa Plus can be sold for \$19 per gallon.

Skim milk can be processed further to yield 57,200 gallons of ice cream, for an additional processing cost per usable gallon of \$4. The product can be sold for \$9 per gallon. There are no beginning and ending inventory balances.

Using estimated net realizable value, what amount of the joint costs would be allocated FeCa Plus and the skim ice cream? (Round intermediary percentage calculations to the nearest hundredth.)

- A) \$675,000 and \$286,000
B) \$130,984 and \$55,496
C) \$93,240 and \$93,240
D) \$86,448 and \$100,032
8. Poseidon Inc. operates two divisions: (1) a management division that owns and manages bulk carriers and (2) a repair division that operates a dry dock. The repair division works on company ships and outside large-hull ships. The repair division has an estimated variable cost of \$47 per labor-hour, has a backlog of work for outside ships, and charges \$80.00 per hour for labor, which is standard for this type of work. The management division complained that it could hire its own repair workers for \$55.00 per hour, including leasing an adequate work area. What is the minimum transfer price per hour that the repair division should obtain for its services, assuming it is operating at capacity?
- A) \$51.00.
B) \$47.00.
C) \$55.00.
D) \$80.00.

9. NCKU Manufacturing Inc. has two support departments, Maintenance and Personnel. Maintenance Department costs of \$360,000 are allocated on the basis of budgeted maintenance-hours. Personnel Department costs of \$110,000 are allocated based on the number of employees. The costs of operating departments X and Y are \$188,000 and \$282,000, respectively. Data on budgeted maintenance-hours and number of employees are as follows:

| | Support Departments | | Operating Departments | |
|----------------------------|------------------------|----------------------|-----------------------|-----------|
| | Maintenance Department | Personnel Department | X | Y |
| Budgeted costs | \$360,000 | \$110,000 | \$188,000 | \$282,000 |
| Budgeted maintenance-hours | NA | 880 | 1120 | 680 |
| Number of employees | 60 | NA | 290 | 630 |

- Using the direct method, what amount of Maintenance Department costs will be allocated to Department Y? (Do not round any intermediary calculations.)
- A) \$91,343
 B) \$136,000
 C) \$75,326
 D) \$167,330
10. Aurora Inc. is a distributor of CDs. Polaris Mart is a local retail outlet which sells blank and recorded CDs. Polaris Mart purchases CDs from Aurora at \$29.00 per CD; CDs are shipped in packages of 65. Aurora pays all incoming freight, and Polaris Mart does not inspect the CDs due to Aurora's reputation for high quality. Annual demand is 321,000 CDs at a rate of 6800 CDs per week. Polaris 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 \$117.50
- Carrying costs per package per year:
- Relevant insurance, materials handling, breakage, etc., per year \$9.50
- What are the annual relevant carrying costs?
- A) \$9,362
 B) \$9,209
 C) \$849
 D) \$6,511

11. Midas Inc., whose tax rate is 40%, has two sources of funds: long-term debt with a market value of \$6,200,000 and an interest rate of 9%, and equity capital with a market value of \$14,000,000 and a cost of equity of 13%. Midas Inc. has two operating divisions, the Silver division and the Gold division, with the following financial measures for the current year:

| | Total Assets | Current Liabilities | Operating Income |
|-------------|--------------|---------------------|------------------|
| Silver Div. | \$9,500,000 | \$2,500,000 | \$1,155,000 |
| Gold Div. | \$12,000,000 | \$2,900,000 | \$1,600,000 |

Calculate EVA for the Gold Division. (Round intermediary calculations to four decimal places.)

- A) \$10,970
 - B) -\$10,970
 - C) -\$1,733,330
 - D) \$629,030
12. Which of the following statements is **TRUE**?
- A) Reducing the investment base to improve ROI involves decreasing idle cash, paying down debt, determining proper inventory levels, and spending carefully on long-term assets.
 - B) Return on investment can be calculated by multiplying return on assets by investment turnover.
 - C) A major weakness of comparing two companies using only operating incomes as the basis of comparison is that it ignores the differences in the size of the investment and therefore any concept of yield or return on investment.
 - D) Required rate of return multiplied by the investment is the weighted average cost of the investment.
13. Apollo Manufacturing Inc, makes a product with the following costs per unit:
- | | |
|-----------------------------------|-------|
| Direct materials | \$180 |
| Direct labor | \$20 |
| Manufacturing overhead (variable) | \$30 |
| Manufacturing overhead (fixed) | \$130 |
| Marketing costs | \$75 |
- What would be the inventoriable cost per unit under variable costing and what would it be under absorption costing?
- A) \$180 for variable costing and \$305 under absorption costing
 - B) \$305 for variable costing and \$435 under absorption costing
 - C) \$230 for variable costing and \$360 under absorption costing
 - D) \$200 for variable costing and \$360 under absorption costing

14. Practical capacity is the denominator-level concept that _____.
- A) reduces theoretical capacity for unavoidable operating interruptions
 - B) is the maximum level of operations at maximum efficiency
 - C) is based on the level of capacity utilization that satisfies average customer demand over periods generally longer than one year
 - D) is based on anticipated levels of capacity utilization for the coming budget period
15. Which of the following measures capacity levels in terms of demand for the output of the plant?
- A) practical capacity and theoretical capacity
 - B) theoretical capacity and normal capacity utilization
 - C) normal capacity utilization and master-budget capacity utilization
 - D) master-budget capacity utilization and practical capacity
16. The Cinderella Shoes Company uses flexible budgeting for cost control. Cinderella produced 10,800 units of product during February, incurring indirect material costs of \$14,000. Cinderella's master budget reflected indirect material costs of \$180,000 at a production volume of 144,000 units. What was the indirect material cost variance for February?
- A) \$1,100 favorable
 - B) \$500 favorable
 - C) \$2,000 favorable
 - D) \$500 unfavorable
17. Sustainability is the balancing of short and long term goals in all three dimensions of the company's performance. Those three areas are:
- A) Economic, social, and environmental.
 - B) Economic, social, and financial.
 - C) Economic, environmental, and political.
 - D) Social, environmental, and financial.
18. To complete the first setup on a new machine took an employee 320 minutes. Using a 70% cumulative average-time learning curve indicates that the second setup on the new machine is expected to take _____.
- A) 112 minutes
 - B) 128 minutes
 - C) 272 minutes
 - D) 224 minutes

19. Which of the following statements best defines a product differentiation strategy?
- A) It describes how an organization can increase customer base by differentiating its' product prices from its competitors.
 - B) It is an organization's ability to achieve lower costs relative to competitors through productivity and efficiency improvements, elimination of waste, and tight cost control.
 - C) It describes how an organization can decrease product prices by differentiating its' raw materials from its competitors.
 - D) It is an organization's ability to offer products or services its customers perceive to be superior and unique relative to the products or services of its competitors.
20. Which of the following statements concerning value chain analysis is **FALSE**?
- A) The goal of value chain analysis is to find areas where a company can either add value or reduce cost.
 - B) The value chain focuses on the entire production process, as well as the sale of the product and service after the sale.
 - C) If a company cannot compete in a specific area of the value chain, it might consider the option of outsourcing that portion of the value chain to someone who can perform it better.
 - D) Throughout most industries, the most successful firms are the ones that operate within the entire value chain, thereby overseeing every aspect of the value chain for the customer.

二、計算題 (40%)

1. (15%) Monsters Manufacturing Corporation uses a process-costing system. For February 2020, the company had the following activities:

| | |
|--|--------------|
| Beginning work-in-process inventory (2/3 complete) | 7,200 units |
| Units placed in production | 28,800 units |
| Good units completed | 21,600 units |
| Ending work-in-process inventory | 12,000 units |
| Cost of beginning work in process | \$ 6,000 |
| Direct material costs, current | \$21,600 |
| Conversion costs, current | \$14,400 |

Direct materials are placed into production at the beginning of the process. All spoilage is normal and is detected at the end of the process. Ending WIP is 80% completed as to conversion.

Required:

Prepare a production cost worksheet for February 2020 using the FIFO method.

2. (15%) Howl's Moving Company desires to buy a new machine to help move and install modular buildings. The machine sells for \$75,000 and requires working capital of \$10,000. Its estimated useful life is six years and it will have a salvage value of \$17,560. Recovery of working capital will be \$10,000 at the end of its useful life. Annual cash savings from the purchase of the machine will be \$20,000.

Required:

- Compute the net present value at a 12% required rate of return. (6%)
- Compute the internal rate of return. (6%)
- Determine the payback period of the investment. (3%)

3. (10%) Shepherd Coffee Shop sells two types of coffee, Hawaii Kona and Blue Mountain. The monthly budget for U.S. coffee sales is based on a combination of last year's performance, a forecast of industry sales, and the company's expected share of the U.S. market. The following information is provided for February:

| | Actual | | Budget | |
|-------------------------|----------------------|--------------------|----------------------|--------------------|
| | <u>Blue Mountain</u> | <u>Hawaii Kona</u> | <u>Blue Mountain</u> | <u>Hawaii Kona</u> |
| Sales in pounds | 15,000 lbs. | 17,000 lbs. | 13,500 lbs. | 18,000 lbs. |
| Price per pound | \$13.00 | \$16.00 | \$13.00 | \$16.00 |
| Variable cost per pound | <u>7.00</u> | <u>9.00</u> | <u>6.50</u> | <u>9.00</u> |
| Contribution margin | <u>\$6.00</u> | <u>\$7.00</u> | <u>\$6.50</u> | <u>\$7.00</u> |

Budgeted and actual fixed corporate-sustaining costs are \$80,000 and \$72,000, respectively.

Required:

- Calculate (4%)
 - the actual contribution margin for the month
 - the contribution margin for the static budget
 - the contribution margin for the flexible budget.
- Determine the total static-budget variance, the total flexible-budget variance, and the total sales-volume variance in terms of the contribution margin. (6%)