

國立成功大學
115學年度碩士班招生考試試題

編 號： 151

系 所： 會計學系

科 目： 成本與管理會計學

日 期： 0204

節 次： 第 3 節

注 意： 1. 可使用計算機
2. 請於答案卷(卡)作答，於
試題上作答，不予計分。

一、選擇題(90%，一題 3%)

1. Honey Store currently sells cookies. During a typical month, the store reports a profit of \$8,000 with sales of \$50,000, fixed costs of \$22,000, and variable costs of \$0.8 per cookie. Next year, the company plans to start selling cupcakes for \$5 per unit. The cupcake will have a variable cost of \$1.25 and new equipment and personnel to produce cupcakes will increase monthly fixed costs by \$8,800. Initial sales of cupcakes should total at least 5,000 units. Most of the cupcake sales are anticipated to come from current cupcake purchasers; therefore, monthly sales of cookies are expected to decline. Assume a constant sales mix of 2 cookies and 1 cupcake. Which of the following is *FALSE*?
 - A) Before adding cupcakes, the contribution margin is \$30,000
 - B) The breakeven units of cookies are 18,334 before adding cupcakes.
 - C) After adding cupcakes, the breakeven units of cupcakes are 6,222 units.
 - D) After adding cupcakes, the breakeven revenue of cookies is \$20,036

2. If the contribution ratio is 0.4, the targeted operating income is \$75,000, and the targeted sales volume in dollars is \$300,000, then the total fixed costs are:
 - A) \$225,000
 - B) \$112,500
 - C) \$90,000
 - D) \$45,000

3. NCKU Manufacturing Inc. ends the month with two jobs still in progress. Job 128 has \$12,000 of materials, \$2,000 of direct labor and \$5,000 of manufacturing overhead allocated. Job 129 has \$36,000 of materials, \$3,000 of direct labor and \$10,000 of manufacturing overhead allocated. The cost of goods sold for the month was \$30,000 and of that 30% was overhead. There were no finished goods in stock as the month ends. If the manufacturing overhead is underallocated by \$10,000, which of the following choices would be the correct way to prorate it, assuming the proration is based on the allocated overhead in the ending balances of work-in-process, finished goods, and cost of goods sold? (Round any allocation percentages to one decimal place, X.X%.)
 - A) Cost of goods sold should be increased by \$3,060
 - B) Ending balances of work-in-process should be reduced by \$6,250
 - C) Cost of goods sold should be increased by \$3,750
 - D) Ending balances of work-in-process should be increased by \$7,000

4. A company only manufactures one product. The following shows the data related to the product:

Direct materials standard	10 square yards at \$6 per yard
Direct manufacturing labor standard	5 hours at \$10 per labor-hour

During the last quarter of 2025, the company made 1,650 units of product and used 15,000 square yards of direct materials costing \$75,000. Direct labor totaled 7,600 hours for \$91,200. Which of the following is *correct*?
 - A) Direct material efficiency variance is \$9,000 unfavorable
 - B) Direct material price variance is \$16,500 favorable
 - C) Direct manufacturing labor price variance is \$15,200 unfavorable
 - D) Direct manufacturing labor efficiency variance is \$6,500 unfavorable

5. NCKU Company uses the traditional costing method to allocate its overhead costs based on direct labor hours. However, the manager of NCKU is considering transferring to activity-based costing because the manager thinks that ABC system can provide more accurate cost information. The following is the ABC costing information provided by the accountant:

<u>Activities</u>	<u>Total Costs</u>	<u>Activity-cost drivers</u>
Supervision	\$450,000	10,000 direct labor-hours
Machine Maintenance	\$240,000	30,000 machine-hours
Facility Rent	\$180,000	7,500 square feet of area
Total Costs	<u>\$870,000</u>	

The accounting records show that Job 213 and Job 214 consumed the following resources:

<u>Cost driver</u>	<u>Job 213 Actual level</u>	<u>Job 214 Actual level</u>
Direct labor-hours	270	200
Machine-hours	1,600	3,000
Square feet of area	50	75

Based on the information above, which of the following statements is **FALSE**?

- A) Under the traditional costing system, the amount of total overhead costs allocated to Job 213 is more than that allocated to Job 214.
 - B) Under the ABC system, the amount of total overhead costs allocated to Job 213 is more than that allocated to Job 214.
 - C) Under the ABC system, the amount of Machine maintenance costs allocated to Job 213 is \$12,800 and to Job 214 is \$24,000.
 - D) The total overhead costs allocated to Job 213 under the traditional costing system are less than those allocated to Job 213 under the ABC system.
6. Beauty Inc. can produce 1,200 pairs of shoes per hour, at maximum efficiency. There are three eight-hour shifts each day. Due to unavoidable operating interruptions, production averages 975 pairs per hour. The plant actually operates only 24 days per month. Based on the current budget, Beauty Inc. estimates that it will be able to sell only 515,000 pairs due to the entry of a competitor with aggressive marketing capabilities. But the demand is unlikely to be affected in future and will be around 520,000. Assume the month has 30 days. Which of the following statements is **TRUE**?
- A) The theoretical capacity for the month is 691,200 pairs of shoes, while the practical capacity is 561,600 pairs of shoes. These two measure capacity in terms of what a company can supply.
 - B) The theoretical capacity for the month is 702,000 pairs of shoes, while the normal capacity is 515,000 pairs of shoes.
 - C) The practical capacity is 561,600 pairs of shoes, and the normal capacity is 520,000 pairs of shoes. Both of these two measure capacity in terms of demand for the output of the company.
 - D) The master-budget capacity utilization is 515,000 pairs of shoes, while the theoretical capacity for the month is 864,000.

7. The NCKU Factory has two departments that process all the products. During February, the beginning work in process in the first department was 50% complete as to conversion and 100% complete as to direct materials. The beginning inventory included \$6,000 for materials and \$18,000 for conversion costs. Ending work-in-process inventory in the first department was 40% complete. Direct materials are added at the beginning of the process.

Beginning work in process in the second department was 75% complete as to conversion. Beginning inventories included \$7,000 for transferred-in costs and \$10,080 for conversion costs. Ending inventory was 40% complete.

Additional information about the two departments follows:

	First Dep.	Second Dep.
Beginning work-in-process units	5,000	4,000
Units started this period	14,000	?
Units transferred this period	16,000	18,000
Ending work-in-process units	?	2,000
Material costs added	\$18,000	?
Conversion costs	32,000	\$20,000
Transferred-out cost	50,000	?

If NCKU uses *weighted-average costing*, which of the following is/are *correct* for the second department?

- a. The units started in December are 16,000
- b. The equivalent units of conversion cost are 15,800 units.
- c. The equivalent units of transferred-in cost are 16,000 units.
- d. The equivalent-unit cost of conversion cost is \$1.6
- e. The equivalent-unit cost of transferred-in cost is \$3.125
- f. The total cost of transferred out is \$80,100

- A) c, d, f
- B) a, d, f
- C) b, c, e, f
- D) a, c, d, e, f

8. ABC Company sells its products for \$38 each. The current production level is 50,000 units, although only 40,000 units are anticipated to be sold.

Unit manufacturing costs are:

Direct materials	\$6.00
Direct manufacturing labor	\$10.00
Variable manufacturing costs	\$6.50
Total fixed manufacturing costs	\$180,000

Marketing expenses \$4.00 per unit, plus \$120,000 per year

Which of the following is *correct*?

- A) The contribution margin is \$460,000 and the gross margin is \$440,000
- B) The contribution margin is \$620,000 and the gross margin is \$476,000
- C) The operating income under absorption costing is lower than that under variable costing.
- D) The contribution margin is \$460,000 and the operating income is \$160,000 under variable costing.

9. Smart Custom Company manufactures products in its Processing Department. Direct materials are incorporated at the start of the production cycle and must be packaged individually into single kits for each unit. Conversion costs are incurred evenly throughout the production cycle. Inspection takes place as units are placed into production. After inspection, some units are spoiled due to undetectable material defects. Spoiled units generally constitute 5% of the good units. Data provided for February 2026 are as follows:

WIP, beginning inventory 2/1/2026	32,000 units
Direct materials (100% complete)	
Conversion costs (90% complete)	
 Started during February	 70,500 units
Completed and transferred out	80,500 units
 WIP, ending inventory 2/28/2026	 17,700 units
Direct materials (100% complete)	
Conversion costs (80% complete)	

Costs:

WIP, beginning inventory:	
Direct materials	\$70,200
Conversion costs	40,500
Direct materials added	156,000
Conversion costs added	158,160

What are the normal and abnormal spoilage units, respectively, for February when using *FIFO*?

- A) 4,025 units; 275 units
- B) 4,300 units; 0 units
- C) 3,525 units; 775 units
- D) 2,425 units; 1,875units

10. The following shows the production data of 2025 for the mixed costs incurred by NCKU company.

<u>Month</u>	<u>Cost</u>	<u>Units</u>
January	\$5,110	4,100
February	\$5,550	3,500
March	\$6,760	5,530
April	\$10,200	8,500
May	\$5,900	5,010
June	\$7,440	6,530
July	\$8,200	6,700
August	\$9,750	8,315
September	\$5,750	4,980
October	\$6,500	5,200
November	\$5,800	5,000
December	\$10,050	8,200

The accountant also ran a regression to estimate the association between cost and the product units:

$$\text{Cost} = \$785 + \$1.08 \times \text{Units}$$

Based on the data, which of the following statements is *FALSE*?

- A) If the manager predicts that the company will produce and sell 9,500 units of product, the estimated cost will be \$11,045 based on the regression model.
- B) If the manager predicts that the company will produce and sell 9,500 units of product, the estimated cost will be \$11,075 based on the high-low method.
- C) The cost function based on the high-low method $\text{Cost} = \$2,295 + \$0.93 \times \text{Units}$
- D) To estimate the cost more precisely, it is better to use the regression model than to use the high-low method.

11. Candy Shop currently makes chocolates and a variety of decorative jars used for packaging. Currently, an outside supplier has offered to supply all of the needed decorative jars. For this decision, a cost analysis revealed the following unit costs for the decorative jars:

Direct materials	\$0.52
Direct labor	0.06
Unit-related support costs	0.30
Batch-related support costs	0.25
Product-sustaining support costs	0.44
Facility-sustaining support costs	<u>0.60</u>
Total cost per jar	<u>\$2.17</u>

Even if the decorative jars are manufactured by an outside supplier, facility-sustaining support costs remain unavoidable. Which of the following statements is **TRUE**?

- A) The maximum price that Candy Shop should be willing to pay for the decorative jars is \$2.17 per jar.
 - B) The relevant cost per jar of this decision is \$1.57.
 - C) The shop should only consider the cost of direct materials, direct labor, and unit-related support costs because these costs can be traced.
 - D) The maximum price that Candy Shop should be willing to pay for the decorative jars is \$1.13
12. NCKU has two departments, the Processing Department and the Testing Department. The Processing Department produces products and transfers them to the Testing Department for testing. The following shows the information on these two departments:

	Processing	Testing
Annual capacity	330 units per year	295 units per year
Units produced	295 units per year	295 units per year

NCKU sells its products for \$55,000 per unit and has direct material costs of \$26,000. All costs other than direct material costs are fixed. Which of the following is **TRUE**?

- A) NCKU should find ways to increase the units produced in the Processing Department because it has unused capacity.
 - B) If the NCKU's manager finds a way to reduce processing time, which would cost \$25 per unit and allow NCKU to produce 35 additional units a year, NCKU should implement the new method.
 - C) If a new testing technique has been developed that will enable NCKU to test an additional 20 units of product and will increase testing costs by \$267,000 each year, NCKU should implement the new testing technique.
 - D) If NCKU's designers have proposed a change in direct materials that would increase direct material costs by \$3,500 per unit, which would enable NCKU to test 320 units of product each year, NCKU should use the new direct materials.
13. A company manufactures and sells products and expects to sell 1,350 units in 2026. The following estimates are given for 2026:

Selling price	\$50
Direct materials	7
Direct labor	19
Manufacturing overhead	13

The company had an inventory of 115 units of products at the end of 2025. It has decided that as a measure to counter stock outages, it will maintain an ending inventory of 250 units of product. Each product requires 2 units of a specific component, CRT, and has to be imported at a cost of \$2. There were 125 units of CRT in stock at the end of 2025 and the management does not want to have any stock of CRT at the end of 2026. What is the amount budgeted for the purchase of CRT in 2026?

- A) \$6,150
- B) \$5,940
- C) \$5,690
- D) \$2,720

14. The following table shows a company's information with lost data:

Analysis	Actual Results	Flexible Variances	Flexible Budget	Sales-Volume Variances	Static Budget
Units Sold	112,500		112,500		103,125
Revenues	\$42,080	\$1,000 F		\$1,400 U	
Variable Costs		\$200 U	\$15,860		\$18,200
Fixed Costs	\$8,280				\$9,140
Operating Income	\$17,740		\$16,080		\$15,140

Which of the following is **TRUE**?

- A) The amount of flexible-budget revenues is \$43,080
- B) For fixed costs, the flexible-budget variance is \$0 and the sales volume variance is \$860F
- C) The actual variable cost is \$15,660 and the sales volume variances of variable costs is \$2,340F
- D) The total flexible-budget variance is \$1,660F and the total statistic-budget variance is \$2,600 F

15. NCKU Company manufactures 27,500 units of products during February 2026. The total overhead budget is \$723,000. Additional information on variable overhead is presented in the following:

Standard cost per unit: 1.8 labor hours at \$10 per hour

Actual costs: \$371,250 for 41,250 hours

Which of the following is **incorrect**?

- A) Variable overhead spending variance is \$41,250 unfavorable
- B) Variable overhead efficiency variance is \$82,500 favorable
- C) Total flexible-budget variance for variable overhead is \$123,750 favorable
- D) Fixed overhead budget is \$228,000

16. Sales-mix variance = \$238,000 (F), sales-volume variance = \$515,000 (U), flexible-budget variance = \$200,000 (F), market-size variance = \$134,000 (U), calculate the market-share variance.

- A) \$619,000 (U)
- B) \$887,000 (F)
- C) \$143,000 (U)
- D) \$619,000(F)

17. A company needs to upgrade its computer system or buy a new one. The information on the two alternatives is shown as follows:

	Current System	New System
Purchase Price	\$120,500	\$162,500
Current book value	40,500	
Upgrade costs	30,250	
Annual cash operating costs	69,300	53,800
Current salvage value	44,000	
Salvage value in five years	8,000	33,000

Assume the current required rate of return is 15%. Which of the following is **TRUE**?

- A) The NPV of buying a new system is \$(326,437)
- B) The NPV of upgrading the current system is \$(262,544)
- C) The company should buy a new computer system based on the results of NPV.
- D) The NPV of upgrading the current system is \$23,869 higher than that of buying a new one.

18. NCKU company has two supporting departments, Equipment Maintenance and Data Processing, and two operating departments, Machining and Capping. The following shows the data collected for analysis:

Budgeted manufacturing overhead costs:

Equipment Maintenance (EM)	\$350,000
Data Processing (DP)	\$75,000
Machining (M)	\$250,000
Capping (C)	\$135,000

Services furnished:

	Equipment Maintenance	Data Processing	Machining	Capping
Equipment Maintenance (labor -hours)		3,500	5,000	8,500
Data Processing (computer hour)	1,100		3,900	500

Which of the following linear equations is *correct*?

- A) $DP = \$75,000 + (3,500/17,000)EM$
- B) $DP = \$75,000 + (1,100/5,500)EM$
- C) $EM = \$350,000 + (3,500/17,000)DP$
- D) $EM = \$350,000 + (1,100/4,600)EM$

19. A company produces two products, LCT and HCT. Both products used the same direct materials and underwent identical processing procedures before the split-off point. The following information presents the production and sales data for February:

Direct materials processed: 125,000 kilograms

Production of LCT: 50,000 kilograms

Production of HCT: 75,000 kilograms

LCT can be sold for \$8 per kilogram while HCT can be sold for \$4.5 per kilogram. The costs of purchasing the direct material and processing it up to the split-off point to yield a total of 125,000 kilograms of saleable product was \$257,500. There were no inventory balances of either product.

LCT may be further processed into 45,000 kilograms of advanced products, MCT, for an additional processing cost of \$11 per usable kilogram. MCT can be sold for \$30 per kilogram. HCT can be further processed into 72,000 kilograms of ICT, for an additional processing cost per usable kilogram of \$7. ICT can be sold for \$15 per kilogram. There are no beginning and ending inventory balances.

Using the estimated net realizable value, what amount of the joint costs would be allocated to MCT and ICT? (Round intermediary percentage calculations to the nearest hundredth.)

- A) \$153,856 and \$103,644
- B) \$143,067 and \$114,433
- C) \$139,668 and \$117,832
- D) \$99,035 and \$158,465

20. A company is required to decrease its carbon emissions and wants to use the Balanced Scorecard (BSC) as a strategic management tool to achieve the target. Which of the following measures should be classified as the measure of the internal-business-process perspective?

- A) Carbon cost per unit of output
- B) The percentage of customers satisfied with carbon performance
- C) Employee engagement on sustainability
- D) The percentage of processes using low-carbon technology

21. The following is a strategic analysis of the profitability of with lost data.

	Income Statement Amounts in 2025	Revenue and Cost Effects of Growth Component in 2026	Revenue and Cost Effects of Price-Recovery Component in 2026	Effect of Productivity Component in 2026	Income Statement Amounts in 2026
Revenues (\$)	52,000	14,000 F	1,700 U		
Costs	27,500		600 U		29,900
Operating income	24,500	9,600 F	2,300 U	2,600 F	

Which of the following is **TRUE**?

- A) The cost of effect of productivity component is \$0
 - B) The amount of revenues in 2026 is \$66,900
 - C) The cost effect of growth component is \$4,400 F
 - D) The operating income amount for 2026 is \$34,400
22. NCKU Corp. manufactures smartphone cases. It takes 75 minutes for the manufacturing department to receive order details after a customer places an order. The waiting time is 68 minutes before the start of production and the manufacturing lead time is 178 minutes per case. It takes 24 hours to deliver the finished product to customers. What is NCKU's manufacturing cycle efficiency? (Round to the nearest whole percent.)
- A) 11%
 - B) 44%
 - C) 62%
 - D) 72%
23. XYZ Company has the following information available concerning its inventory items:
- Relevant ordering costs per purchase order \$550
 - Relevant carrying costs per year for each product:
 - Required annual return on investment 11%
 - Required other costs per year \$8
- Annual demand is 50,000 products per year. The purchase price per product is \$50. Which of the following is **TRUE**?
- A) The unit carrying costs are equal to \$8
 - B) The Economic-Order-Quantity (EOQ) is 2,622 units
 - C) The annual relevant carrying costs are equal to \$13,628.
 - D) The total annual relevant costs are \$13,628.
24. An inventory item of NCKU Company has an average daily demand of 36 units with a maximum daily demand of 45 units. The economic order quantity (EOQ) is 630 units. Without safety stocks, the reorder point is 252 units. Safety stocks are set at 200 units. Which of the following is **TRUE**?
- A) Average lead time is 13 days
 - B) The reorder point with safety stocks is 830 units
 - C) The maximum inventory level of NCKU is 830 units
 - D) The minimum inventory level of NCKU is zero units

25. NCKU Company is highly decentralized, so each division is empowered to make its own sales decisions. The Taipei Division can purchase IC, a key component, from the Tainan Division or from external suppliers. The Tainan Division has been the major supplier of IC in recent years. The Taipei Division has announced that two external suppliers will be used to purchase the IC at \$40 per pound for the next year. The Tainan Division recently increased its unit price to \$55. The manager of the Tainan Division presented the following information – variable costs of \$35 and fixed costs of \$22 – to top management in an attempt to persuade the Taipei Division to purchase the IC internally. The Taipei Division purchases 31,600 pounds of IC per month. Assuming that the external supplier increased its price to \$85 per pound and the Tainan Division can utilize the facilities for other operations, resulting in a monthly cash-operating savings of \$33 per pound, which of the following is *correct*?

- A) There is no opportunity cost for the Tainan Division to produce and sell IC to the Taipei Division.
- B) If the external supplier increased its price to \$85 per pound, the total monthly operating advantage of purchasing the goods internally would be \$537,200
- C) If the external supplier increased its price to \$85 per pound, the total monthly operating disadvantage of purchasing the good externally would be \$1,422,000
- D) Taipei Division should purchase IC from the external supplier because purchasing the goods externally can save more costs for NCKU

26. NCKU Company has two sources of funds:

Long-term debt with a market and book value of \$5,500,000 issued at an interest rate of 14%

Equity capital with market value of \$4,500,000 (book value of \$2,500,000)

NCKU has profit centers in the following locations with the following information:

	Revenues	Operating Income	Assets	Current Liabilities
Kaohsiung	\$1,300,000	\$500,000	\$2,100,000	\$125,000
Tainan	\$1,950,000	\$630,000	\$4,000,000	\$350,000
Taipei	\$4,250,000	\$1,150,000	\$7,500,000	\$600,000

The cost of equity capital is 12% and the tax rate is 35%. Which of the following is *TRUE*?

- A) The EVA for Kaohsiung is \$66,275
- B) The ROI of Tainan is 48.75%
- C) The ROS of Taipei is 15%
- D) Kaohsiung has the highest EVA, ROI, and ROS.

27. After conducting a market research study, ACC Manufacturing decided to produce a new product to complement its existing product line. It is estimated that the new product can be sold at a target price of \$270. The annual target sales volume for the new product is 20,000. ACC Manufacturing has target operating income of 30% of sales. What is the target cost for each new product?

- A) \$351
- B) \$270
- C) \$189
- D) \$81

28. XYZ Shop sells two products: chocolate bars and cupcakes. A box of chocolate bars sells for \$25 and a bag of cupcakes sells for \$16. Both a box of chocolate bars and a bag of cupcakes sell for \$37 as a bundle. What is the revenue allocated to cupcakes if chocolate bars are termed as the primary product in the bundle?

- A) \$12
- B) \$14
- C) \$16
- D) \$19

29. A company is considering eliminating product LCT from its product line because of losses over the past quarter. The past three months of information for LCT are summarized below:

Sales (1,000 units)	\$246,000
Manufacturing costs:	
Direct Materials	87,000
Direct Labor (\$15 per hour)	75,000
Support	<u>100,000</u>
Operating loss	<u>(\$16,000)</u>

Support costs are 60% variable and the remaining 40% is depreciation of special equipment for LCT that has no resale value. Should the company eliminate LCT from its product line?

- A) Yes, because LCT incurred a loss of \$16,000
- B) Yes, because the cost of \$162,000 incurred in producing LCT will be eliminated
- C) No, because the contribution margin of LCT is \$84,000
- D) No, because LCT contributes \$24,000 toward fixed costs and profits.

30. A company produces two products, LCT and HCT. Weekly demand is estimated to be 150 units of LCT and 65 units of HCT. The following presents the per unit data:

	<u>LCT</u>	<u>HCT</u>
Contribution margin per unit	\$27	\$35
Number of machine-hours required	3	5

If there are 450 machine-hours available per week, how many units of each product should the company produce to maximize profits?

- A) Only 150 units of LCT
- B) 150 units of LCT and 65 units of HCT
- C) 41 units of LCT and 65 units of HCT
- D) 100 units of LCT and 30 units of HCT

二、申論題(10%)

某零售商面臨嚴重虧損，CEO 召集有關部門主管開會檢討，並要求策略部門提出解決方案，策略部門分析各部門主管提出的各樣看法後，得出造成虧損的原因在於營業額成長緩慢，且因物價及工資率上漲造成營運成本快速增加，公司營運成本亦高於主要競爭對手，因此提出兩個方案：

方案一：先執行裁員降低人事成本，接著進行流程改善減少非人事相關成本，最後以重整後新組織型態進行營運規劃以提高營業額

方案二：首先針對營運問題提出解決方案以提高營業額，接著再透過流程改善以減少非人事相關成本，最後才進行裁員降低人事成本

如果你是公司的 CEO，會採行哪個方案？請詳細說明原因。