

科目：成本與管理會計學

系所組：會計學系碩士班

注意事項：

1. 第一大題選擇題未按作答格式(範例如下)作答者，扣該科總分 10 分。

選擇題作答格式(範例)，請作答於彌封答案卷第一頁

1.	2.	3.	4.	5.
6.	7.	8.	9.	10.
11.	12.	13.	14.	15.

2. 非選擇題未書寫計算過程者不予計分。

## 一、選擇題(15 題，每題 5 分)

Question 1 and 2 are based on the following information.

Pan Co. is a producer of a tank component. This product, J-5, has the following selling price and costs per unit:

Selling price	\$300
Direct materials	125
Direct labor	25
Variable manufacturing overhead	50
Shipping and handling	5
Fixed manufacturing overhead	15
Fixed selling and administrative	10
Total costs	\$230

- Pan has recently received a special, one-time order for 2,000 units of J-5. Pan currently has enough excess capacity for this order. What should be the minimum price charged by Pan?  
A. \$155    B. \$205    C. \$230    D. \$300
- Pan has again received a special, one-time offer for 2,000 units of J-5. Pan is now operating at full capacity, 10,000 units, at a total cost of \$2,300,000. To produce this order would cause a 20% increase in fixed costs. What is the minimum price that is acceptable for this one-time, special order?  
A. \$205    B. \$260    C. \$230    D. \$300

Question 3 and 4 are based on the following information.

Barn Corporation manufactures skateboards and is in the process of preparing next year's budget. The pro forma income statement for the current year is presented below.

Sales		\$1,500,000
Cost of sales:		
Direct materials	\$250,000	
Direct labor	150,000	
Variable overhead	75,000	
Fixed overhead	100,000	(575,000)
Gross profit		\$ 925,000
Selling and G&A:		
Variable	\$200,000	
Fixed	250,000	(450,000)
Operating income		\$ 475,000

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3. The breakeven point (rounded to the nearest dollar) for Barn Corporation for the current year is:  
A. \$146,341    B. \$636,364    C. \$729,730    D. \$181,818
4. For the coming year, the management of Barn Corporation anticipates a 10% increase in sales, a 12% increase in variable costs, and a \$45,000 increase in fixed expenses. The breakeven point for next year will be?  
A. \$729,027    B. \$862,103    C. \$214,018    D. \$474,000
5. Three of the basic measurements used by the theory of constraints (TOC) are:  
A. Gross margin (or gross profit), return on assets, and total sales.  
B. Number of constraints (or subordinates), number of nonconstraints, and operating leverage.  
C. Throughput (or throughput contribution), inventory (or investments), and operational expense.  
D. Fixed manufacturing overhead per unit, fixed general overhead per unit, and unit gross margin (or gross profit).
6. Ming Company has budgeted sales at 6,300 units for the next fiscal year and desires to have 590 good units on hand at the end of that year. Beginning inventory is 470 units. Ming has found from past experience that 10% of all units produced do not pass final inspection and therefore must be destroyed. How many units should Ming plan to produce in the next fiscal year?  
A. 6,890    B. 7,062    C. 7,133    D. 7,186
7. Mount Corporation manufactures cabinets but outsources the handles. Eight handles are needed for a cabinet, with assembly requiring 30 minutes of direct labor per unit. Ending finished goods inventory is planned to consist of 50% of projected unit sales for the next month, and ending handles inventory is planned to be 80% of the requirement for the next month's projected unit output of finished goods.

Mount's projected unit sales:	
October	4,600
November	5,000
December	4,200
January	6,000

Mount's ending inventories in units at September 30:	
Finished goods	3,800
Handles	16,000

Given that a full-time employee works 160 hours per month, no overtime is allowed, and part-time employees may be used, how many full-time equivalent employees does Mount need to assemble the output of finished units in November?

- A. 14.375    B. 28.75    C. 15.625    D. 31.25

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8. Holl Company is in the process of projecting its cash position at the end of the second quarter. Shown below is pertinent information from Holl's records.

Cash balance at end of 1st quarter	\$ 36,000
Cash collections from customers for 2nd quarter	1,300,000
Accounts payable at end of 1st quarter	100,000
Accounts payable at end of 2nd quarter	75,000
All 2nd quarter costs and expenses (accrual basis)	1,200,000
Depreciation (accrued expense included above)	60,000
Purchases of equipment (for cash)	50,000
Gain on sale of asset (for cash)	5,000
Net book value of asset sold	35,000
Repayment of notes payable	66,000

From the data above, determine Holl's projected cash balance at the end of the second quarter.

- A. \$0                      B. \$25,000                      C. \$60,000                      D. \$95,000
9. Process value analysis is a key component of activity-based management that links product costing and ?
- A. Reduction of the number of cost pools.  
B. Continuous improvement.  
C. Accumulation of heterogeneous cost pools.  
D. Overhead rates based on broad averages.
10. San Corporation utilizes an activity-based costing system for applying costs to its two products, P and Q. In the assembly department, material handling costs vary directly with the number of parts inserted into the product. Machinery is recalibrated and oiled each weekend regardless of the number of parts inserted during the previous week. Both material handling and machinery maintenance costs are charged to the product on the basis of the number of parts inserted. Due to reengineering of the production process for Product P, the number of insertion parts per finished unit has been reduced. How will the redesign of the production process for Product P affect the activity-based cost of Product Q?
- A. Material handling cost per Q will remain unchanged, and machinery maintenance cost per Q unit will remain unchanged.  
B. Material handling cost per Q unit will increase, and machinery maintenance cost per Q unit will remain unchanged.  
C. Material handling cost per Q will remain unchanged, and machinery maintenance cost per Q unit will increase.  
D. Material handling cost per Q unit will increase, and machinery maintenance cost per Q unit will increase.
11. A full-cost transfer price is:
- A. The price on the open market.  
B. The price representing the cash outflows of the supplying division plus the contribution to the supplying division from an outside sale.  
C. The price usually set by an absorption-costing calculation.  
D. The price set by charging for variable costs plus an additional markup, but less than full (absorption) cost.

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12. An appropriate transfer price between two divisions of The Star Company can be determined from the following data:

Fabricating Division:		Assembling Division:	
Market price of subassembly	\$50	Number of units needed	900
Variable cost of subassembly	\$20		
Excess capacity (in units)	1,000		

What is the natural bargaining range for the two divisions?

- A. Between \$20 and \$50.
- B. Between \$50 and \$70.
- C. Any amount less than \$50.
- D. \$50 is the only acceptable price.

13. In preparing the annual profit plan for the coming year, Wilk Company wants to determine the cost behavior pattern of the maintenance costs. Wilk has decided to use linear regression by employing the equation  $y = a + bx$  for maintenance costs. The prior year's data regarding maintenance hours and costs, and the results of the regression analysis, are given below.

	Hours of Activity	Maintenance Costs	Average cost per hour \$9.00	
January	480	\$ 4,200	a	684.65
February	320	3,000	b	7.2884
March	400	3,600	Standard error of a	49.515
April	300	2,820	Standard error of b	.12126
May	500	4,350	Standard error of the estimate	34.469
June	310	2,960	$r^2$	.99724
July	320	3,030		
August	520	4,470		
September	490	4,260		
October	470	4,050		
November	350	3,300		
December	340	3,160		
Sum	4,800	\$43,200		
Average	400	\$ 3,600		

If Wilk Company uses the high/low method of analysis, the equation for the relationship between hours of activity and maintenance cost would be:

- A.  $y = 400 + 9.0x$
- B.  $y = 570 + 7.5x$
- C.  $y = 3,600 + 400x$
- D.  $y = 570 + 9.0x$

14. The cost associated with abnormal spoilage ordinarily is charged to

- A. Inventory.
- B. A material variance account.
- C. Manufacturing overhead.
- D. A special loss account.

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15. A company's product has an expected 4-year life cycle from research, development, and design through its withdrawal from the market. Budgeted costs are:

Upstream costs (R&D, design)	\$2,000,000
Manufacturing costs	3,000,000
Downstream costs (marketing, distribution, customer service)	1,200,000
After-purchase costs	1,000,000

The company plans to produce 200,000 units and price the product at 125% of the whole-life unit cost. Thus, the budgeted unit selling price is:

A. \$15                  B. \$31                  C. \$36                  D. \$45

二、 Miller Corp. applies manufacturing overhead to production at 125% of direct labor cost. During 2023, manufacturing overhead of \$100,000 was applied to production; actual manufacturing overhead was \$109,000. Beginning Work in Process Inventory was \$15,000 and beginning Finished Goods Inventory was \$35,000. Work in Process Inventory increased by 10% during the year and Finished Goods Inventory decreased by 20% during the year. Sales for 2023 were \$450,000, yielding a \$130,000 gross profit.

**Required(10%): Complete the following schedule (請依照下表格式作答在答案紙):**

	答案
Direct materials used in production	(1)
Direct labor	(2)
Manufacturing overhead applied	(3)
Current manufacturing costs	(4)
Beginning Work in Process Inventory	(5)
Ending Work in Process Inventory	(6)
Cost of goods manufactured	(7)
Beginning Finished Goods Inventory	(8)
Ending Finished Goods Inventory	(9)
Unadjusted Cost of Goods Sold	(10)
Overhead adjustment	(11)
Adjusted Cost of Goods Sold	(12)

三、 The following data pertain to AAA Corporation:

Income	\$8,000,000
Sales revenue	40,000,000
Average invested capital	50,000,000

**Required (9%): Calculate AAA Corporation's (1) sales margin, (2) capital turnover, and (3) return on investment.**

四、 Lake Corporation manufactures specialty components for the electronics industry in a highly labor intensive environment. BAC Electronics has asked Lake to bid on a component that Lake made for BAC last month. The previous order was for 80 units and required 120 hours of direct labor to manufacture. BAC would now like 240 additional components. Lake experiences an 80% learning curve on all of its jobs.

**Required (6%): The number of direct labor hours needed for Lake to complete the 240 additional components is?**

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