

# 國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 1 頁

系所組別：會計與資訊科技學系-甲組

## 一、選擇題(單選，每題 2 分，共計 50 分)

1. Care Inc., has two divisions that operate independently of one another. The financial data for the year 2015 reported the following results:

	<u>North</u>	<u>South</u>
Sales	\$6,000,000	\$5,000,000
Operating income	1,900,000	1,600,000
Taxable income	1,600,000	750,000
Investment	16,000,000	10,000,000

The company's desired rate of return is 10%. Income is defined as operating income.

What are the respective return-on-investment ratios for the North and South Divisions?

- A) 16.00% and 11.88%  
B) 10.00% and 7.50%  
C) 11.88% and 16.00%  
D) 7.50% and 10.00%
2. Which of the following best describes a transfer price?  
A) It is the price charged by an organization when it transfer goods to another organization in lieu of services provided by it.  
B) It is the price that is to be used while calculating revenue from sales to customers for tax purposes.  
C) It is the price that is charged by a department of an organization when it sells its goods to its competitors.  
D) It is the price one subunit charges for a product or service supplied to another subunit of the same organization.
3. Which of the following statements best defines backflush costing system?  
A) an integrated costing system covering a company's accounting, distribution, manufacturing, purchasing, human resources, and other functions  
B) a costing system that omits recording some of the journal entries relating to the stages from the purchase of direct materials to the sale of finished goods  
C) 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  
D) a costing system that comprises a single database that collects data and feeds it into software applications supporting all of a company's business activities
4. Ventaz Corp manufactures small windows for back yard sheds. Historically, its demand has ranged from 30 to 50 windows per day with an average of 43. Alex is the one production worker and he works eight hours a day, five days a week. Each order is one window and each window takes 7 minutes. Alex plans to add doors to its product line and anticipates that they will average 2 doors per day. Each door takes V4 minutes to install.
- What is the average waiting time, in minutes, if Alex continues to be the only worker?  
A) 216 minutes  
B) 241 minutes  
C) 289 minutes  
D) 363 minutes
5. Which of the following reduces manufacturing cycle times and delays?  
A) increasing the capacity of a bottleneck resource  
B) selling of an existing equipment to save up on depreciation costs  
C) increasing the time it takes for setups and processing

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 2 頁

系所組別：會計與資訊科技學系-甲組

- D) outsourcing the job to a third party
6. The Berkel Corporation manufactures Widgets, Gizmos, and Turnbols from a joint process. June production is 7000 widgets; 10,500 gizmos; and 12,500 turnbols. Respective per unit selling prices at split-off are \$80, \$55, and \$30. Joint costs up to the split-off point are \$188,500. If joint costs are allocated based upon the sales value at split-off, what amount of joint costs will be allocated to the widgets? (Do not round any intermediary calculations.)
- A) \$23,492  
B) \$69,792  
C) \$46,736  
D) \$71,973
7. Which of the following describes who the direct allocation method allocates support-department costs?
- A) it allocates support-department costs to operating departments by fully recognizing the mutual services provided among all support departments  
B) it allocates support-department costs to other support departments and to operating departments in a sequential manner that partially recognizes the mutual services provided among all support departments  
C) it allocates each support-department's costs to operating departments only  
D) it requires managers to rank the support departments in the order that the step-down allocation is to proceed
8. The Conity Corporation has an Electric Mixer Division and an Electric Lamp Division. Of a \$16,000,000 bond issuance, the Electric Mixer Division used \$9,600,000 and the Electric Lamp Division used \$6,400,000 for expansion. Interest costs on the bond totaled \$1,000,000 for the year. What amount of interest costs should be allocated to the Electric Lamp Division? (Round any intermediary calculations two decimal places and your final answer to the nearest dollar.)
- A) \$400,000  
B) \$600,000  
C) \$625,000  
D) \$6,400,000
9. What role does a trade-in allowance on old equipment play in a decision to retain or replace equipment?
- A) It is relevant since it increases the cost of the new equipment.  
B) It is irrelevant since it reduces the cost of the old equipment.  
C) It is irrelevant to the decision since it does not impact the cost of the new equipment.  
D) It is relevant since it reduces the cost of the new equipment.
10. Jean Peck's Furniture manufactures tables for hospitality sector. It takes only bulk orders and each table is sold for \$400 after negotiations. In the month of January, it manufactures 3,200 tables and sells 2,400 tables. Actual fixed costs are the same as the amount of fixed costs budgeted for the month.

The following information is provided for the month of January:

Variable manufacturing costs	\$130 per unit
Fixed manufacturing costs	\$90,000 per month
Fixed Administrative expenses	\$30,000 per month

At the end of the month Jean Peck's Furniture has an ending inventory of finished goods of 800 units. The company also incurs a sales commission of \$11 per unit.

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 3 頁

系所組別：會計與資訊科技學系-甲組

What is the cost of goods sold per unit when using absorption costing?

- A) \$130.00
- B) \$101.87
- C) \$158.13
- D) \$169.13

11. Crush Company makes internal transfers at 155% of full cost. The Soda Refining Division purchases 41,000 containers of carbonated water per day, on average, from a local supplier, who delivers the water for \$58 per container via an external shipper. To reduce costs, the company located an independent supplier in Illinois who is willing to sell 41,000 containers at \$38 each, delivered to Crush Company's Shipping Division in Missouri. The company's Shipping Division in Missouri has excess capacity and can ship the 41,000 containers at a variable cost of \$12.50 per container. What is the total cost of purchasing the water from the Illinois supplier and shipping it to the Soda Division?

- A) \$1,558,000
- B) \$2,070,500
- C) \$2,378,000
- D) \$512,500

12. In using the net present value method, only projects with a zero or positive net present value are acceptable because \_\_\_\_\_.

- A) the return from these projects equals or exceeds the cost of capital
- B) a positive net present value on a particular project guarantees company profitability
- C) the company will be able to pay the necessary payments on any loans secured to finance the project
- D) it results in high payback period

13. Which of the following sentences is true of classification of spoilage as normal or abnormal when inventories are present?

- A) Classifying spoilage as normal rather than abnormal results in same current operating income.
- B) Classifying spoilage as normal rather than abnormal results in an decrease in current operating income.
- C) Classifying spoilage as abnormal rather than normal results in an increase in current operating income.
- D) Classifying spoilage as normal rather than abnormal results in an increase in current operating income.

14. Direct Disk Drive Company operates a computer disk manufacturing plant. Direct materials are added at the end of the process. The following data were for June 2017:

Work in process, beginning inventory	25,400 units
Transferred-in costs (100% complete)	
Direct materials (0% complete)	
Conversion costs (85% complete)	

Transferred in during current period	165,100 units
Completed and transferred out	185,200 units

Work in process, ending inventory	5700 units
Transferred-in costs (100% complete)	
Direct materials (0% complete)	
Conversion costs (65% complete)	

How many units must be accounted for during the period?

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 4 頁

系所組別：會計與資訊科技學系-甲組

- A) 216,300 units
- B) 169,945units
- C) 190,500 units
- D) 139,700 units

15. Buzz's Educational Software Outlet sells two or more of the video games as a single package. Managers are keenly interested in individual product-profitability figures. Information pertaining to three bundled products and the stand-alone prices is as follows:

	Stand-Alone Selling Price	Cost	Package	Packaged Price
<i>Reading Fun</i>	\$24	\$3.65	1. <i>Reading Fun &amp; Math Fun</i>	\$51
<i>Math Fun</i>	\$37	\$4.30	2. <i>Reading Fun &amp; Analysis</i>	\$63
<i>Analysis</i>	\$53	\$5.35	3. <i>All three</i>	\$90

Using the incremental method for revenue allocation, what amount of revenue will be allocated to Reading Fun in the first package (Reading Fun & Math Fun)? Assume Reading Fun is the primary product, followed by Math Fun, and then Analysis. (Do not round any intermediary calculations.)

- A) \$30.07
  - B) \$28.93
  - C) \$26.00
  - D) \$24.00
16. Sales of Granite City Products Inc. have been on a steady decline for the last 12 months. A market research study conducted revealed that the product of Granite City Products Inc. can be sold only for \$420 as opposed to the current market price charged of \$520 per unit. Granite City Products Inc. has decided to revise its sales price to \$420. The annual sales target volume of the product after price revision is 280 units. Granite City Products Inc. wants to earn 30% on its sales amount.

What is the target operating income?

- A) \$82,320
  - B) \$35,280
  - C) \$117,600
  - D) \$152,880
17. Which of the following is the correct formula for the materials price variance?
- A) (Actual price of input - Budgeted price of input) x Budgeted quantity of input
  - B) (Actual quantity of input used - Budgeted quantity of input allowed for actual output) x Budgeted price of input
  - C) (Actual price of input - Budgeted price of input) x Actual quantity of input
  - D) (Actual quantity of input used - Budgeted quantity of input allowed for actual output) x Actual price of input
18. Place the following steps in the order suggested by the seven steps used to assign costs to individual jobs:
- A. Identify indirect costs
  - B. Compute the total cost of the job
  - C. Select cost-allocation bases
  - D. Compute the indirect cost rate

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 5 頁

系所組別：會計與資訊科技學系-甲組

- A) ACDB
- B) CADB
- C) BACD
- D) DCAB

19. Bell Company sells several products. Information of average revenue and costs is as follows:

Selling price per unit	\$29
Variable costs per unit:	
Direct material	\$6
Direct manufacturing labor	\$1.75
Manufacturing overhead	\$0.25
Selling costs	\$2
Annual fixed costs	\$111,000

The company sells 13,000 units.

What is the proportion of variable costs to total costs?

- A) 43.15%
  - B) 41.27%
  - C) 77.25%
  - D) 53.94%
20. Which of the following might explain why one manager might assign certain costs to a cost object while a different manager might assign some different costs to that same cost object?
- A) one manager might be pricing a cost object while the other manager might be seeking the inventoriable cost
  - B) For financial statement purposes, one manager might include all the costs of the value chain while the other might only include GAAP cost
  - C) one manager might value an inventory item for the balance sheet as the sum of all the value chain costs while another manager might choose to only recognize variable costs as inventoriable costs for GAAP purposes.
  - D) one manager might classify one cost as direct while another might classify that same cost as indirect
21. Trusted Products Company makes a household appliance with model number L800. The goal for 2018 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 L800 units that can be produced. The industry market size for appliances increased 2% from 2017 to 2018. The following additional data are available for 2017 and 2018:

	<u>2017</u>	<u>2018</u>
Units of L800 produced and sold	31,000	31,620
Selling price	\$310	\$290
Direct materials (square feet)	98,000	96,500
Direct material costs per square foot	\$34	\$36
Manufacturing capacity for L800 (units)	38,750	37,350
Total conversion costs	\$1,162,500	\$1,120,500
Conversion costs per unit of capacity	\$30	\$30

Overall, was Trusted Products's strategy successful in 2018?

- A) Yes, because total revenues increased
- B) No, because operating income decreased

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 6 頁

系所組別：會計與資訊科技學系-甲組

C) No, because direct materials usage per unit increased

D) No, because direct material cost per unit decreased

22. Majestic Corporation manufactures wheel barrows and uses budgeted machine hours to allocate variable manufacturing overhead. The following information relates to the company's manufacturing overhead data:

Budgeted output units	43,500 units
Budgeted machine-hours	17,400 hours
Budgeted variable manufacturing overhead costs for 43,500 units	\$382,800

Actual output units produced	45,500 units
Actual machine-hours used	14,500 hours
Actual variable manufacturing overhead costs	\$435,709

What is the flexible-budget variance for variable manufacturing overhead?

A) \$35,309 unfavorable

B) \$52,909 unfavorable

C) \$35,309 favorable

D) \$52,909 favorable

23. For next year, Roberts, Inc., has budgeted sales of 20,000 units, targeted ending finished goods inventory of 1,650 units, and beginning finished goods inventory of 750 units. All other inventories are zero. How many units should be produced next year?

A) 19,100 units

B) 20,000 units

C) 20,900 units

D) 22,400 units

24. Johnson Superior Products Inc. produces hospital equipment and the setup requirements vary from product to product. Johnson produces its products based on customer orders and uses ABC costing. In one of its indirect cost pools, setup costs and distribution costs are pooled together. Costs in this pool are allocated using number of customer orders for the easiness of costing operations. Based on the information provided, which of the following arguments is valid?

A) Johnson has clearly failed to identify as many direct costs as is economically feasible.

B) All costs in a homogeneous cost pool have the same or a similar cause-and-effect relationship with the single cost driver that is used as the cost-allocation base for Johnson.

C) Johnson has unnecessarily wasted resources by classifying setup and distribution costs as they could have been considered as direct costs.

D) Johnson has failed to use the correct cost driver as the cost-allocation base for setup costs.

25. The cost components of a heater include \$35 for the compressor, \$11 for the sheet molded compound frame, and \$74 per unit for assembly. The factory machines and tools cost is \$55,000. The company expects to produce 1,300 heaters in the coming year. What cost function best represents these costs?

A)  $y = 55,000 + 120X$

B)  $y = 1,300 + 55,000X$

C)  $y = 55,000 + 1,300X$

D)  $y = 1,300 + 120X$

二、計算題 (請詳列計算過程並清楚標記答案，共計 50 分)

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學

本科目共 8 頁 第 7 頁

系所組別：會計與資訊科技學系-甲組

1. 兩儂公司生產甲、乙、丙三種產品，以下為其相關資料：

製造費用	金額	成本動因
檢驗成本	\$125,000	檢驗次數
運輸成本	560,000	運輸里數
機器整備	620,000	整備次數
機器維修	78,000	維修時數
動力	120,000	機器小時
折舊費用(機器)	112,000	機器小時
總計	\$1,615,000	

  

	甲	乙	丙
生產單位	7,000	63,000	29,000
直接人工小時	35,000	30,000	65,000
機器小時	25,000	8,000	50,000
檢驗次數	175	125	200
運輸里數	80	140	120
整備次數	90	150	120
維修時數	1,500	500	3,000
原料單位成本	\$50	\$60	\$40
直接人工小時每單位成本	\$10	\$10	\$10

試作 (計算無法整除請四捨五入至小數第二位)：

- (1) 利用全廠單一分攤法，以直接人工小時為基礎計算丙公司產品之單位成本。(共計 3 分)
- (2) 利用作業基礎成本制，決定每一產品之單位成本。(共計 9 分)

2. 慶儀公司是一家水果罐頭公司，有加工和裝罐兩部門。下列為兩個部門去年的營運資料：

	加工部門	裝罐部門
總資產	\$3,250,000	\$4,750,000
流動負債	600,000	1,000,000
稅前淨利	375,000	800,000

試作：

- (1) 計算裝罐部門的剩餘利潤，公司的必要報酬率為 12% (以稅前淨利與長期資金為基礎)。(共計 3 分)
- (2) 該公司的資金來源有二種：
  - a. 長期負債 \$4,500,000，利率 10%
  - b. 業主權益年底市價 \$3,000,000，權益資金成本 15%
 慶儀公司所得稅率為 40%，試計算該公司的加權平均資金成本 (WACC)。(共計 3 分)
- (3). 分別計算加工部門與裝罐部門的附加經濟價值 (EVA) (共計 6 分)

3. Aiko Works Corp. produces J-Pods, music players that can download thousands of songs. Aiko Works forecasts that demand in 2021 will be 48,000 J-Pods. The variable production cost of each J-Pod is \$54. In its MRP system, due to the large \$10,000 cost per setup, Aiko Works plans to produce J-Pods once

國立中正大學 111 學年度碩士班招生考試試題

科目名稱：成本及管理會計學  
系所組別：會計與資訊科技學系-甲組

本科目共 8 頁 第 8 頁

**a month in batches of 4,000 each. The carrying cost of a unit in inventory is \$17 per year.**

Required:

- (1) Using the MRP system, what is the annual cost of producing and carrying J-Pods in inventory? (Assume that, on average, half of the units produced in a month are in inventory.) (共計3分)
- (2) A new manager at Aiko Works has suggested that the company use the EOQ model to determine the optimal batch size to produce. (To use the EOQ model, Aiko Works needs to treat the setup cost in the same way it would treat ordering cost in a traditional EOQ model.) Determine the optimal batch size and number of batches. **Round up the number of batches to the nearest whole number.** What would be the annual cost of producing and carrying J-Pods in inventory if it uses the optimal batch size? (共計3分)
- (3) Aiko Works is also considering switching from its MRP system to a JIT system. This will result in producing J-Pods in batch sizes of 600 J-Pods and will reduce obsolescence, improve quality, and result in a higher selling price. Aiko Works will reduce setup time and setup cost. The new setup cost will be \$500 per setup. What is the annual cost of producing and carrying J-Pods in inventory under the JIT system? (共計3分)

**4. The new CEO of Hana Manufacturing has asked for information about the operations of the firm from last year. The CEO is given the following information, but with some data missing:**

Total sales revenue	?
Number of units produced and sold	500,000 units
Selling price	?
Operating income	\$180,000
Total investment in assets	\$2,250,000
Variable cost per unit	\$4.00
Fixed costs for the year	\$2,500,000

Required:

- (1) Find (a) total sales revenue, (b) selling price, and (c) markup percentage on full cost for this product. (共計9分)
- (2) The new CEO has a plan to reduce fixed costs by \$225,000 and variable costs by \$0.30 per unit while continuing to produce and sell 500,000 units. Using the same markup percentage as in requirement 1, calculate the new selling price. (共計4分)
- (3) Assume the CEO institutes the changes in requirement 2 including the new selling price. However, the reduction in variable cost has resulted in lower product quality resulting in 5% fewer units being sold compared with before the change. Calculate operating income (loss). (共計4分)