

# 國立中山大學 108 學年度 碩士暨碩士專班招生考試試題

科目名稱：總體經濟學【經濟所碩士班】

## —作答注意事項—

考試時間：100 分鐘

- 考試開始響前不得翻閱試題，並不得書寫、劃記、作答。請先檢查答案卷（卡）之應考證號碼、桌角號碼、應試科目是否正確，如有不同立即請監試人員處理。
- 答案卷限用藍、黑色筆(含鉛筆)書寫、繪圖或標示，可攜帶橡皮擦、無色透明無文字墊板、尺規、修正液（帶）、手錶(未附計算器者)。每人每節限使用一份答案卷，不得另攜帶紙張，請衡酌作答。
- 答案卡請以 2B 鉛筆劃記，不可使用修正液（帶）塗改，未使用 2B 鉛筆、劃記太輕或污損致光學閱讀機無法辨識答案者，其後果由考生自行負擔。
- 答案卷（卡）應保持清潔完整，不得折疊、破壞或塗改應考證號碼及條碼，亦不得書寫考生姓名、應考證號碼或與答案無關之任何文字或符號。
- 可否使用計算機請依試題資訊內標註為準，如「可以」使用，廠牌、功能不拘，唯不得攜帶具有通訊、記憶或收發等功能或其他有礙試場安寧、考試公平之各類器材、物品（如鬧鈴、行動電話、電子字典等）入場。
- 試題及答案卷（卡）請務必繳回，未繳回者該科成績以零分計算。
- 試題採雙面列印，考生應注意試題頁數確實作答。
- 違規者依本校招生考試試場規則及違規處理辦法處理。

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題號：403001

※本科目依簡章規定「不可以」使用計算機(混合題)

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## I. Multiple-Choice Questions (52%, 4 points each, 單選題)

1. We learn the following about a ski resort: ticket sales \$100M, snow making expenses \$70M, wages \$20M, interest on business loans \$5M, and profits \$5M. What is the contribution to GDP using the product approach?

(A) \$70M. (B) \$80M. (C) \$95M. (D) \$100M.

2. Suppose that GDP is equal to 1000, national saving is equal to 200, the current account deficit is equal to 100, and the government budget deficit is equal to 50. Private savings must equal?

(A) 150. (B) 200. (C) 250. (D) 300.

3. Suppose an economy produces only food and clothing, and that price and quantity data are given in the table below. If Year 2 is the base year, what is the net growth rate of *real* GDP?

(A) 35%. (B) 44%. (C) 58%. (D) 110%.

Year 1		
goods	quantity	price
food	20	\$6
clothing	10	\$8
Year 2		
goods	quantity	price
food	25	\$10
clothing	20	\$7

4. Jim's Nursery produces and sells \$1100 worth of flowers. He uses no intermediate inputs and pays his workers \$700 in wages, \$100 in taxes, pays \$200 in interest on a loan. Jim's value added to GDP is?

(A) \$1100. (B) \$400. (C) \$300. (D) \$100.

5. If the savings rate falls in the Solow growth model

- (A) steady state capital per worker rises.
- (B) the steady state growth rate in output increases.
- (C) per worker output falls in the steady state.
- (D) per capita consumption falls in the short run.

6. An increase in second-period income results in

- (A) an increase in first-period consumption, an increase in second-period consumption, and an increase in saving.
- (B) an increase in first-period consumption, a decrease in second-period consumption, and an increase in saving.
- (C) a decrease in first-period consumption, an increase in second-period consumption, and an increase in saving.
- (D) an increase in first-period consumption, an increase in second-period consumption, and a decrease in saving.

7. We know the following about a tie manufacturer: tie sales \$1,300, cotton purchases \$750, wages \$400, interest on business loans \$100, and profits \$50. What is the contribution to GDP of this producer using the income approach?

(A) \$550. (B) \$500. (C) \$450. (D) \$400.

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2. Suppose the following national income accounts identity describes the economy
- $$y = c + i$$
- where  $y$ ,  $c$  and  $i$  are, respectively, the per worker production, consumption and investment.
- (a) Solve for the condition that describes the Golden Rule, and explain the meaning of the condition. [8 points]
- (b) Consider the three savings rates 0.2, 0.5 and 0.8. If a policymaker intends to choose one that maximizes the consumption per worker in the steady state. Suppose output per worker is governed by the production function  $y = k^{1/2}$ , and the depreciation of capital is  $\delta=0.1$ . Which of the three savings rates is the best choice for the policymaker? [12 points]
3. Please explain how the output supply is constructed and why it is positively related to the real interest rate. Besides, when the current TFP (total factor productivity) increases, how is the output supply affected? [10 points]

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8. The condition,  $MRS_{C,C'} = 1 + r$ , describes the representative consumer's
- (A) investment decision.
  - (B) consumption - savings decision.
  - (C) current period work - leisure decision.
  - (D) future period work - leisure decision.
9. Output supply is increasing in the interest rate because
- (A) labor demand is increasing in the interest rate.
  - (B) labor demand is decreasing in the interest rate.
  - (C) labor supply is increasing in the interest rate.
  - (D) labor supply is decreasing in the interest rate.
10. The total government expenditure multiplier is less than one because
- (A) government expenses affect labor demand.
  - (B) labor supply reacts to interest rate changes and consumption demand is affected by taxes.
  - (C) investment demand falls dramatically when the government goes into debt.
  - (D) the marginal propensity to consume is less than one.
11. The equilibrium effects of a temporary increase in total factor productivity include
- (A) an increase in the real wage and an increase in the real interest rate.
  - (B) an increase in the real wage and a decrease in the real interest rate.
  - (C) a decrease in the real wage and an increase in the real interest rate.
  - (D) a decrease in the real wage and a decrease in the real interest rate.
12. The equilibrium effects of a prospective future increase in total factor productivity include
- (A) an increase in the real wage and an increase in the real interest rate.
  - (B) an increase in the real wage and a decrease in the real interest rate.
  - (C) a decrease in the real wage and an increase in the real interest rate.
  - (D) a decrease in the real wage and a decrease in the real interest rate.
13. Ricardian equivalence implies
- (A) that when the government borrows more, the market real interest rate goes up.
  - (B) that if the government saves less, then the nation saves less.
  - (C) that when taxes are cut people consume more.
  - (D) that consumers will save their tax cuts to pay their future taxes.

**II. Problems and Calculations (48%) Explain all your answers in detail.**

1. Consider an economy described by the aggregate production function:  $Y = F(K, N) = K^{0.3}N^{0.7}$ , where  $K$  is the aggregate capital and  $N$  is the total number of workers. In this economy, the savings rate is exogenously given and equals  $s$ , and the depreciation rate is  $\delta$ .
- (a) Find the per-worker production function. [3 points]
  - (b) Assuming no population growth or technological progress, find the steady-state capital stock per worker, output per worker, and consumption per worker as a function of the saving rate ( $s$ ) and the depreciation rate ( $\delta$ ). Explain how the output per worker is affected by the saving rate ( $s$ ) and the depreciation rate ( $\delta$ ), respectively. [15 points]

背面有題

試題請隨卷繳回