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一、(20 分) 馬祖公司本年度成本及零售價資料如下：

	成本	零售價
期初存貨	\$140,000	\$190,000
本期進貨	750,000	820,000
進貨折扣	32,000	
進貨退出	49,000	45,000
進貨運費	20,000	
加價		150,000
加價取消		30,000
減價		115,000
減價取消		35,000
銷貨		640,000
銷貨折扣		39,000
非常損耗	8,400	10,800

試作：

分別以下列二種方法估計馬祖公司之成本率與期末存貨成本（成本率以百分比格式表示，並四捨五入至小數點第二位，例如 50.67%）：

(一)先進先出零售價法。

(二)平均成本與淨變現價值孰低法。

二、(20 分) 金門公司在 X1 年 1 月 1 日購買澎湖公司面額\$1,000,000，5 年期，票面利率 5%的公司債，每年付息一次，付息日為 1 月 1 日，此債券被分類為透過損益按公允價值衡量之投資。與該公司債相同信用等級的市場利率為 6.5%，金門公司支付\$938,000（含交易成本\$335）購買此債券。X1 年 12 月 31 日此債券之公允價值為\$968,613。金門公司在 X2 年 1 月 1 日收到利息後，以\$969,000（含交易成本\$387）出售此債券。金門及澎湖兩公司均使用有效利息法攤銷債券折溢價。

試作：

(一) 金門公司 X1 年及 X2 年有關債券投資應有之分錄。（金額四捨五入計算至整數元）。

(二) 澎湖公司 X1 年及 X2 年有關債券發行應有之分錄。

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三、(20 分) 屏東公司 X2 年及 X1 年 12 月 31 日比較資產負債表如下：

	X2/12/31	X1/12/31		X2/12/31	X1/12/31
現金	\$ 240,000	\$ 150,000	應付帳款	\$ 1,215,000	\$ 1,200,000
應收帳款(淨額)	1,230,000	1,305,000	應付公司債	1,500,000	1,500,000
存貨	525,000	480,000	普通股		
土地	645,000	450,000	(每股面值\$10)	2,250,000	1,950,000
機器設備	5,625,000	4,875,000	資本公積	265,500	198,000
累計折舊	(1,920,000)	(1,725,000)	保留盈餘	1,684,500	1,287,000
專利權	570,000	600,000			
總計	\$6,915,000	\$6,135,000	總計	\$6,915,000	\$6,135,000

X2 年度其他相關資料：

- (1)屏東公司 X2 年度稅後淨利為\$772,500。
- (2)出售一部成本\$525,000，累計折舊\$390,000 之機器，收現\$174,000，另外還以現金購入新機器。
- (3)發行 15,000 股普通股換取公平市價\$195,000 之土地一塊。
- (4)現金增資普通股 15,000 股。
- (5)宣布並支付現金股利\$375,000。

試作：利用間接法編製屏東公司 X2 年度的現金流量表。

四、(10 分) 臺東汽車公司在 x2 年共賣出 1,200 部汽車，每部平均售價約 \$800,000。公司提供售後服務保固期限為 2 年，依據過去經驗估計有 15%會要求修理，每次平均\$10,000。假設 x3 年因履行售後服務實際支出 \$800,000，試作臺東汽車x2 年及 x3 年相關分錄。

五、(10 分) 臺南公司有下列交易，請作成分錄：

- 1/3 收到花蓮公司償還欠款之票據一紙，該票據面額 \$500,000，60 日期，利率 4%。(假設 1 年 360 天)
- 1/18 宜蘭公司欠款 \$40,000 無法收回，會計人員將該筆帳款沖銷。
- 2/12 將花蓮公司之票據向銀行貼現，貼現率為 6%。
- 2/17 收到高雄公司欠款 \$2,500，該欠款已於去年沖銷。

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六、(20 分) 以下四小題係有關財務報表分析，請分別作答：

(一) 甲公司採用曆年制，其 X7 年度及 X8 年度發生如下之錯誤：

X7 年之期末存貨低估\$3,000，X8 年之期末存貨高估\$14,000；

X7 年之設備折舊費用低估\$6,500，X8 年之設備折舊費用高估\$40,000。

假設甲公司至 X9 年底均未發現上項錯誤，且 X9 年度未再發生其他錯誤。若不考慮所得稅之影響。

試作：上述錯誤對甲公司 X9 年 12 月 31 日流動比率之影響為何（高估或低估或不影響）？

(二) 乙公司之流動資產包括現金、應收帳款、存貨及預付費用，在 X5 年 12 月 31 日之流動比率為 2.4，速動比率為 1.6。公司於 X6 年 1 月間出售一批售價\$500,000，毛利率為 25%之商品後，速動比率變為 2.1。

試作：商品售出後，乙公司之流動比率變為多少？

(三) 丙公司 X2 年之銷貨收入為\$800,000，毛利率為 35%。期初應收帳款為\$170,000，期末應收帳款為\$150,000。另丙公司 X2 年之期初存貨為\$165,000，期末存貨為\$85,000。

試作：丙公司營業循環之天數為多少（一年以 365 天計算，四捨五入至小數點後二位）？

(四) 丁公司 X7 年度的銷貨毛利為銷貨收入的 45%，營業費用為銷貨毛利的 40%，折舊費用為\$1,696,000，占全部營業費用的 25%，利息費用為營業費用的 15%，所得稅率為 20%。丁公司 X7 年度普通股平均流通在外股數為 1,500,000 股，普通股每股市價為\$36.4，當年特別股股利為\$500,000。

試作：丁公司下列項目：

(1) 利息保障倍數

(2) 每股盈餘

(3) 本益比

(若有小數取自第二位並四捨五入)

備

註

一、作答於試題上者，不予計分。
二、試題請隨卷繳交。

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Multiple Choice Questions (單選題) 每題2.5分 選擇題請在答案卡上作答，否則不予計分。

1. "The recent hurricanes in Florida are bringing financial gain to California citrus growers. Due to extensive damage to the Florida citrus crop, California citrus products are commanding their highest prices ever." Which of the following statements best explains the economics of this quotation?

 - A) The supply of Florida oranges decreased, causing their price to increase, which then increased the demand for substitute California oranges.
 - B) The supply of Florida oranges decreased, causing the supply of California oranges to increase and the price of California oranges to rise.
 - C) The demand for Florida oranges decreased because of the hurricanes, causing a greater demand for California oranges and an increase in the price of California oranges.
 - D) The demand for Florida oranges decreased, causing their prices to rise, therefore increasing the demand for California oranges.
2. Suppose that the quantity of pizza demanded decreased by 15 percent after an increase in price of 10 percent. What is the price elasticity of demand for pizza?

 - A) 1.50
 - B) 0.67
 - C) -1.50
 - D) -0.67
3. The market demand curve

 - A) can also be the marginal social cost curve.
 - B) shows the value of a good that consumers must give up to get another unit of a different good.
 - C) by itself determines equilibrium prices.
 - D) can also be the marginal social benefit curve.
4. Price ceilings, such as rent ceilings, set below the equilibrium price

 - A) increase producer surplus.
 - B) decrease producer surplus.
 - C) do not affect producer surplus.
 - D) might increase or decrease producer surplus.

備註	一、作答於試題上者，不予計分。 二、試題請隨卷繳交。
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5. Tariffs and import quotas both result in
- lower levels of domestic production.
 - the domestic government gaining revenue.
 - lower levels of imports.
 - higher levels of domestic consumption.
6. A decrease in consumption will result in
- both total utility and marginal utility decreasing.
 - total utility increasing, but marginal utility decreasing.
 - total utility decreasing, but marginal utility increasing.
 - both total utility and marginal utility increasing.
7. A household's consumption choices cannot exceed limits created by
- only the household's income.
 - only the prices of the goods and services that it buys.
 - both the household's income and the prices of the goods and services that it buys.
 - neither the household's income nor the prices of the goods and services that it buys.
8. A budget line is drawn with automobiles on the vertical axis and boats on the horizontal. Imposing a tax on boats that boosts the price of a boat makes the
- indifference curves flatter.
 - indifference curves steeper.
 - budget line flatter.
 - budget line steeper.
9. The average return for supplying entrepreneurial ability is the entrepreneur's
- accounting profit.
 - normal profit.
 - explicit profit.
 - economic profit.

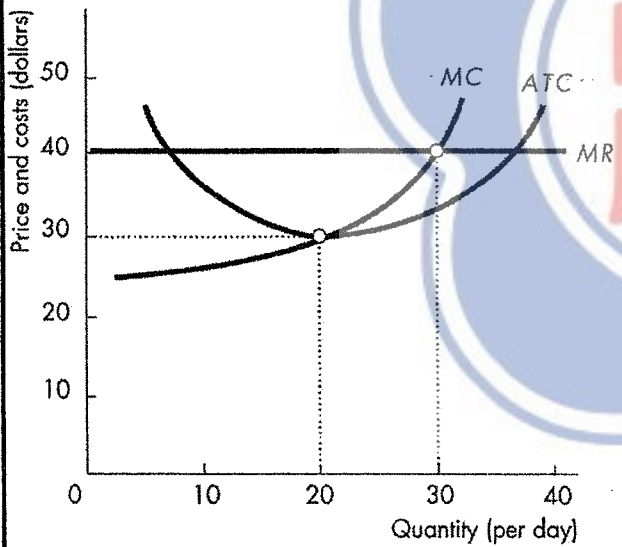
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10. Total product is

- A) the increase in output that results from a one-unit increase in the quantity of labor employed with all other inputs remaining the same.
- B) maximum output that a given quantity of labor can produce.
- C) maximum amount of output produced by a given quantity of labor divided by the given quantity of labor employed.
- D) maximum amount of amount of output produced by a given quantity of labor divided by price of the output.

11. The price elasticity of demand for any particular perfectly competitive firm's output is

- A) less than 1.
- B) 1.
- C) equal to zero.
- D) infinite.



12. The figure above shows a perfectly competitive firm. To maximize its profit, the firm will produce _____ units of output and the price will be _____ for a unit.

- A) 30; \$40
- B) 30; \$30
- C) 20; \$40
- D) 20; \$30

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13. Natural monopolies occur when there are

- A) large diseconomies of scale.
- B) external economies.
- C) large economies of scale.
- D) natural resources involved.

14. Price discrimination takes place when a firm

- A) charges the same price for all the units of its product that it sells.
- B) charges different prices for different units of its product.
- C) is discriminated against by consumers.
- D) None of the above answers is correct.

15. Product differentiation

- A) is why a monopolistic competitor faces a downward-sloping demand curve.
- B) means that the monopolistic competitor's product is a close but not a perfect substitute for the products of its competitors.
- C) enables the monopolistic competitor to compete in product quality.
- D) All of the above answers are correct.

16. A monopolistically competitive firm has excess capacity because in the

- A) short run its MR exceeds its MC .
- B) short run its ATC is less than its AVC .
- C) long run its ATC exceeds its minimum ATC .
- D) long run it makes an economic profit.

17. Suppose that all pizza companies have the same costs and the minimum average total cost is \$12 per pizza.

The pizza companies have an efficient scale of 100 pies per night. In the small town of Coatsville, at the price of \$12 per pizza the quantity demanded is approximately 300 pizzas per night. This market, therefore, can best be characterized as

- A) perfectly competitive.
- B) a natural monopoly.
- C) a natural duopoly.
- D) a natural oligopoly.

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Firm 1

		<u>Sell</u>	<u>Give away</u>
	<u>Sell</u>	1: \$3 2: \$3	1: \$4 2: -\$1
Firm 2			
	<u>Give away</u>	1: -\$1 2: \$4	1: \$2 2: \$2

18. Two software firms have developed an identical new software application. They are debating whether to give the new app away free and then sell add-ons or sell the application at \$30 a copy. The payoff matrix is above and the payoffs are profits in millions of dollars. What is Firm 1's best strategy?

- A) Give away the application regardless of what Firm 2 does.
- B) Sell the application at \$30 a copy regardless of what Firm 2 does.
- C) Give away the application only if Firm 2 sells the application.
- D) Give away the application only if Firm 2 gives away the application.

19. A good or service or a resource is nonrival if

- A) it is possible to prevent someone from enjoying its benefits.
- B) it is not possible to prevent someone from enjoying its benefits.
- C) its use by one person decreases the quantity available for someone else.
- D) its use by one person does not decrease the quantity available for someone else.

20. A movie shown on a pay-per-view cable station is an example of

- A) an excludable and rival good.
- B) a nonexcludable and rival good.
- C) an excludable and nonrival good.
- D) a nonexcludable and nonrival good.

21. Producing paper creates pollution. There is no externality in the consumption of paper. The efficient quantity of paper is when the

- A) marginal social benefit of paper is equal to zero.
- B) marginal social cost of the pollution from making paper is equal to zero.
- C) marginal social benefit of paper is equal to the marginal social cost of paper.
- D) marginal private cost of the pollution from making paper is equal to zero.

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22. GDP does not directly include intermediate goods because

- A) intermediate goods are not valuable.
- B) intermediate goods are not useful to consumers.
- C) that would count the intermediate goods twice.
- D) that would understate the true size of GDP.

23. The unemployment rate is calculated as

- A) $[(\text{labor force}) \div (\text{population})] \times 100$.
- B) $[(\text{unemployment}) \div (\text{population})] \times 100$.
- C) $[(\text{unemployment}) \div (\text{labor force})] \times 100$.
- D) $[(\text{labor force}) \div (\text{unemployment})] \times 100$.

24. The curvature of the production function shows that as employment increases, the productivity of labor

- A) remains positive and increases.
- B) remains positive but decreases.
- C) decreases and becomes negative.
- D) remains constant.

25. Which of the following ideas apply to the neoclassical growth theory?

- I. The rate of technological change influences the rate of economic growth.
- II. Technological change promotes saving and investment.
- III. Convergence of economic growth rates across countries

- A) I only
- B) III only
- C) I and II
- D) I, II and III

26. At the beginning of the year, Tom's Tubes had a capital stock of 5 tube inflating machines. During the year, Tom scrapped 2 old machines and purchased 3 new machines. Tom's gross investment for the year totaled

- A) 1 machine.
- B) 2 machines.
- C) 3 machines.
- D) 6 machines.

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27. According to the Ricardo-Barro effect

- A) government deficits raise the real interest rate.
- B) taxpayers fail to foresee that government deficits imply higher future taxes.
- C) households increase their personal saving when governments run budget deficits.
- D) government budget deficits increase households' expected future disposable income.

28. Checking deposits are included in

- A) M1 only.
- B) M2 only.
- C) M1 and M2.
- D) neither M1 nor M2.

29. If the Fed buys \$100,000 in U.S. government securities from a commercial bank, the bank now has an additional \$100,000 of

- A) total assets.
- B) excess reserves.
- C) actual reserves.
- D) net worth.

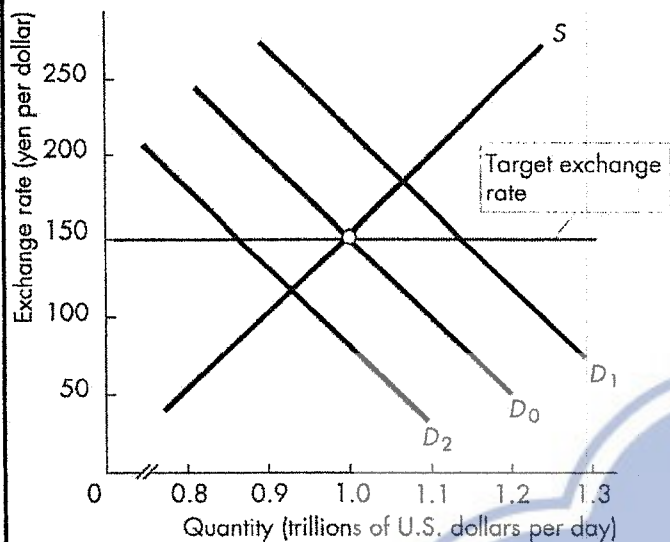
30. Which of the following creates a demand for U.S. dollars?

- A) Toyota, a Japanese firm, purchasing land in Texas
- B) a U.S. restaurant purchasing Mexican tomatoes
- C) a U.S. tourist catching a show in London
- D) a Japanese tourist catching a show in London

31. The short-run aggregate supply curve

- A) shows what each producer is willing and able to produce at each level of income holding constant potential GDP and all resource prices.
- B) shows the relationship between aggregate production and the price level holding constant potential GDP and all resource prices.
- C) becomes vertical if there is excess production capacity within the economy.
- D) shows a negative relationship between the price level and real national income holding constant potential GDP and all resource prices.

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32. In the above figure, suppose the demand for dollars *temporarily* increases so that the demand curve shifts to D_1 . To maintain the target exchange rate, the Fed

- A) can sell dollars.
- B) can buy dollars.
- C) must violate interest rate parity but not purchasing power parity.
- D) cannot maintain the target exchange rate.

33. One reason that the aggregate demand curve has a negative slope is that when the domestic price level rises,

- A) firms produce more goods and services.
- B) firms produce fewer goods and services.
- C) people substitute toward more imported goods and services.
- D) peoples' wealth increases.

34. The MPS equals the ratio of

- A) saving to real GDP.
- B) the change in saving to the change in consumption expenditure.
- C) saving to consumption expenditure.
- D) None of the above answers is correct.

35. When autonomous expenditure changes, the horizontal distance by which the aggregate demand curve shifts

- A) depends on the size of the multiplier.
- B) depends on the size of the wealth effect.

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- C) is increased by the existence of automatic stabilizers.
 D) is determined by the inverse of the multiplier.
36. For monetarists, the main cause of economic fluctuations is represented by changes in
 A) investment.
 B) consumption expenditure.
 C) the growth rate of the quantity of money.
 D) the levels of household debt.
37. Oil prices increase sharply, raising the price level and decreasing real GDP. The Fed has an incentive to
 A) increase the quantity of money in order to reduce unemployment.
 B) decrease the quantity of money in order to reduce unemployment.
 C) increase the quantity of money in order to reduce the price level.
 D) increase the quantity of money in order to reduce the price level and unemployment.
38. The structural deficit is the deficit
 A) during a recession.
 B) during an expansion.
 C) that would occur at full employment.
 D) caused by the business cycle.
39. Open market operations by the Fed lead to
 A) changes in the number of banks.
 B) immediate changes in aggregate supply.
 C) changes in the federal funds rate.
 D) shifts in the demand curve for reserves.
40. Consumer confidence in the economy rises, and as a result, real GDP increases above potential GDP. To move U.S. GDP back to potential GDP, the Fed should
 A) lower the federal funds rate.
 B) raise the federal funds rate.
 C) increase the government's budget deficit.
 D) decrease the government's budget deficit.

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一、填充題 (每題 8%)

- Let $y=(\ln x)^{(\ln x^3)}$, $x > 1$, please find $\frac{dy}{dx} = \underline{(1)}$.
- Please find $\lim_{x \rightarrow 1^+} \frac{\int_x^1 \cos \theta d\theta}{1-x} = \underline{(2)}$.
- Let $w = x^2 y - y^2$, where $x = \sin u$ and $y = e^u$. Find dw/du when $u = 0$. (3).
- $\int \frac{x^4 + 4x^2 - 6x - 4}{x^4 - x^3 + 4x^2 - 4x} dx = \underline{(4)}$.
- $\int_{-\pi/2}^{\pi/2} (\sin^3 x \cdot e^{-x^2} + \cos^2 x) dx = \underline{(5)}$.
- Let $f(x) = \int_0^{1/x} \frac{1}{1+t^2} dt + \int_0^x \frac{1}{1+t^2} dt + 3x$, please find $f'(x) = \underline{(6)}$.

二、計算題 (需有計算或證明過程始計分，每題 13%)

- Proved that if f is differentiable at $x=c$, then f is continuous at $x=c$.
- Let $f(x) = 2 \ln x - x^2$, (a) find the critical numbers of f , if any, (b) find the open intervals on which the function is increasing or decreasing, (c) apply the First Derivative Test to identify all relative extrema.
- Let $f(x) = x^2 + 4$ and $g(x) = -x^3 + x^2 + 3x + 6$. Then $f(-1) = g(-1)$ and $f(2) = g(2)$. Show that there is at least one value c in the interval $(-1, 2)$ where the tangent line to $f(x)$ at $(c, f(c))$ is parallel to the tangent line to $g(x)$ at $(c, g(c))$.
- Discuss the continuity of function: $f(x, y) = 1 - \frac{\cos(x^2 + y^2)}{x^2 + y^2}$ and evaluate the limit of $f(x, y)$ (if it exists) as $(x, y) \rightarrow (0, 0)$.

備

註

- 作答於試題上者，不予計分。
- 試題請隨卷繳交。