

國立中山大學九十二學年度轉學生招生考試試題

科目：微積分【政經系三年級】

共一頁第 / 頁

1. (10分，每小題5分) Evaluate the following limits.

$$(a) y = \lim_{x \rightarrow 2} \frac{1}{x-2} + 1 \quad (b) y = \lim_{x \rightarrow 2} \frac{x^2 - 4x + 4}{x-2} + 1.$$

2. (10分) Which functions are discontinuous over the given intervals? Explain why.

$$(a) y = |x-2|; [0, 4] \quad (b) y = 1 + \frac{1}{x-2}; [0, 4]$$

3. (10分) Is the function $y = -3x^2 + 4$ strictly concave or convex? Explain why.

4. (10分，每小題5分) Determine the derivative of each function.

$$(a) y = \frac{(x+1)}{(2x-1)} \quad (b) y = x^2 + 4x + 3.$$

5. (10分，每小題5分) In the following problems, find the derivate and simplify:

$$(a) \frac{d}{dx} (2x+1)\ln(x+1) \quad (b) \frac{d}{dx} e^{x^2+2x}.$$

6. (10分，每小題5分) In the following problems, find each indefinite integral:

$$(a) \int (\sqrt{x} - \frac{2}{x^2}) dx \quad (b) \int \frac{(\ln x)^2}{x} dx.$$

7. (10分，每小題5分) In the following problems, find the absolute extremum, if it exists, for each function. (You must perform the second-derivate test for absolute maximum and minimum.)

$$(a) f(x) = 2 + 4x - 2x^2 \quad (b) f(x) = 2 + 12x + \frac{3}{x^2}.$$

8. (10分) Find the partial derivatives, second partial derivatives, and the cross partial derivative of the following function.

$$y = 4 - 2x_1 + x_1x_2^2 + 2x_2^3.$$

9. (20分，每小題10分) A company manufactures and sells x radios per week. The weekly cost and price-demand equations are

$$C(x) = 5,000 + 2x, \quad p = 10 - 0.001x, \quad 0 \leq x \leq 10,000.$$

(a) Find the maximum revenue for each week. (b) Find the maximum profit, the production level that will realize the maximum profit, and the price the company should charge for each radio.

國立中山大學九十二學年度轉學生招生考試試題

科目：政治學【政經系三年級】

共 / 頁 第 / 頁

以下申論題共 4 題，每題各 25 分，請詳答。

- 1、請就當今各國主要之經濟制度作一介紹，並分析其背後的意識型態，與該制度之優缺點。
- 2、民主政治在實際的運行上可能有哪些問題與盲點？請就理論與實例說明之。
- 3、請分析國際政治主要理論及不同理論間的差異。
- 4、請分析總統制、內閣制與半總統制等不同政府制度下，行政與立法的權力配置方式，並評論其可能產生的問題。

國立中山大學九十二學年度轉學生招生考試試題

科目：經濟學【政經系三年級】

共 5 頁 第 / 頁

1. The term used to describe a situation in which markets fail to allocate resources efficiently is called
 - a. economic meltdown.
 - b. market failure.
 - c. corporate bankruptcy.
 - d. disequilibrium.
2. You know an economist has crossed the line from scientist to policy adviser when he
 - a. explains just the facts.
 - b. makes positive statements.
 - c. makes normative statements.
 - d. can't reach a conclusion.
3. David Ricardo
 - a. wrote books opposing the ideas of Adam Smith.
 - b. was the founder of modern economics.
 - c. argued in favor of Britain following a free-trade policy.
 - d. wrote *An Inquiry into the Nature and Causes of the Wealth*
4. Trade can make everybody better off because it
 - a. increases cooperation among nations.
 - b. allows people to specialize according to comparative advantage.
 - c. requires some workers in an economy to be retrained.
 - d. reduces competition among domestic companies.
5. Comparative statics involves
 - a. comparisons of varying prices.
 - b. evaluation of buyers' reluctance to pay the market price.
 - c. comparing the old equilibrium and the new equilibrium.
 - d. evaluating the friction that develops between buyers and sellers.
6. OPEC successfully raised the world price of oil in the 1970s and early 1980s primarily due to
 - a. an inelastic demand for oil and a reduction in the amount of oil supplied.
 - b. a reduction in the amount of oil supplied and a world-wide oil embargo.
 - c. a world-wide oil embargo and an elastic demand for oil.
 - d. a reduction in the amount of oil supplied and an elastic demand for oil.
7. If a tax is imposed on a market with inelastic demand and elastic supply,
 - a. buyers will bear most of the burden of the tax.
 - b. sellers will bear most of the burden of the tax.
 - c. the burden of the tax will be shared equally between buyers and sellers.
 - d. it is impossible to determine how the burden of the tax will be shared.
8. The particular price that results in quantity supplied being equal to quantity demanded is the best price because it
 - a. maximizes costs of the seller.
 - b. maximizes the profit of buyers.
 - c. maximizes the total welfare of buyers and sellers.
 - d. minimizes the expenditure of buyers.
9. Suppose that the equilibrium quantity in the market for widgets has been 200 per month. Then a tax of \$5 per widget is imposed on widgets. As a result, the government is able to raise \$750 per month in revenue. But at the same time, an underground market in widgets is created which did not previously exist. The government uses the funds raised in the legal widget market to completely suppress the underground widget market. The action has no effect on the legal market; the government still collects \$750 per month in revenue. By itself, the government's crackdown on the underground market
 - a. increased the deadweight loss to society from the widget tax.
 - b. decreased the deadweight loss to society from the widget tax.
 - c. had no effect on the deadweight loss to society from the widget tax.
 - d. might have increased, decreased or had no effect on the deadweight loss to society from the widget tax.
10. The infant industry argument
 - a. is based on the belief that protecting industries when they are young will pay off later.
 - b. is based on the belief that protecting industries producing goods and services for infants is necessary if a country is to have healthy children.
 - c. has the support of most economists.
 - d. has proven to be correct in nearly all cases.

國立中山大學九十二學年度轉學生招生考試試題

科目：經濟學【政經系三年級】

共 5 頁 第 2 頁

11. When a negative externality exists in a market the cost to producers
 - a. is greater than the cost to society.
 - b. will be the same as the cost to society.
 - c. will be less than the cost to society.
 - d. and society will be different regardless of whether an externality is present.

12. According to the Coase theorem, private markets will solve externality problems and allocate resources efficiently as long as
 - a. private parties can bargain without cost.
 - b. government assigns property rights to the harmed party.
 - c. the externalities that are present are positive and not negative.
 - d. businesses determine an appropriate level of production.

13. Both public goods and common resources are
 - a. rival.
 - b. nonrival.
 - c. excludable.
 - d. nonexcludable.

14. Markets fail to allocate resources efficiently when
 - a. prices fluctuate.
 - b. those with the property rights abuse their privileges.
 - c. property rights are not well established.
 - d. the government refuses to intervene in private markets.

15. The deadweight loss associated with a tax on a commodity is generated by
 - a. those consumers who still choose to consume the commodity, but pay a higher price that reflects the tax.
 - b. those consumers who choose to not consume the commodity that is taxed.
 - c. all citizens who are able to use services provided by government.
 - d. those consumers who are unable to avoid paying the tax.

16. When a firm is operating at an efficient scale,
 - a. average variable cost is minimized.
 - b. average fixed cost is minimized.
 - c. average total cost is minimized.
 - d. None of the above are correct.

17. Diseconomies of scale occur when
 - a. average fixed costs are falling.
 - b. average fixed costs are constant.
 - c. long-run average total costs rise as output increases.
 - d. long-run average total costs fall as output increases.

18. As a general rule, profit-maximizing producers in a competitive market produce output at a point where
 - a. marginal cost is increasing.
 - b. marginal cost is decreasing.
 - c. marginal revenue is increasing.
 - d. price is less than marginal revenue.

19. When an industry is a natural monopoly,
 - a. it is characterized by constant returns to scale.
 - b. it is characterized by diseconomies of scale.
 - c. a larger number of firms may lead to a lower average cost.
 - d. a larger number of firms will lead to a higher average cost.

20. Which of these situations produces the largest profits for oligopolists?
 - a. They reach a Nash equilibrium.
 - b. They reach the monopoly outcome.
 - c. They reach the competitive outcome.
 - d. They produce a quantity of output that lies between the competitive outcome and the monopoly outcome.

國立中山大學九十二學年度轉學生招生考試試題

科目：經濟學【政經系三年級】

共 5 頁 第 3 頁

21. In monopolistically competitive markets, the property of free entry and exit suggests that
 - a. the market structure will eventually be characterized by perfect competition in the long run.
 - b. all firms earn zero economic profits in the long run.
 - c. some firms will be able to earn economic profits in the long run.
 - d. some firms will be forced to incur economic losses in the long run.
22. Diminishing marginal product is closely related to
 - a. diminishing total cost.
 - b. diminishing marginal cost.
 - c. diminishing variable cost.
 - d. increasing marginal cost.
23. The basic neoclassical theory of the labor market predicts that
 - a. workers earn a wage equal to the value they contribute to the economy.
 - b. wages are determined entirely by market demand.
 - c. wages are determined entirely by market supply.
 - d. workers are compensated according to their contribution to the social value of society.
24. Which of the following statements is true?
 - a. The distribution of annual income accurately reflects the distribution of living standards.
 - b. Lifetime incomes are more equally distributed than annual incomes.
 - c. Transitory changes in income generally have a significant impact on a family's standard of living.
 - d. Annual income is more equally distributed than permanent income.
25. When the price of pizza falls, the substitution effect, for normal goods Pepsi and pizza, causes a
 - a. shift to a lower indifference curve so the consumer buys more Pepsi.
 - b. shift to a higher indifference curve so the consumer buys more Pepsi.
 - c. movement along the indifference curve so the consumer buys more Pepsi.
 - d. movement along the indifference curve so the consumer buys less Pepsi.
26. The temptation of imperfectly-monitored workers to shirk their responsibilities is
 - a. an adverse-selection problem.
 - b. a "lemons" problem.
 - c. a problem in which the employer is the principal and the worker is the agent.
 - d. All of the above are correct.
27. The four categories of expenditures that make up GDP are consumption, investment,
 - a. exports, and government purchases.
 - b. imports, and government purchases.
 - c. net exports, and government [query: purchases].
 - d. net exports, and government transfer payments.
28. The real interest rate on a loan
 - a. is the amount that the consumer agrees to pay.
 - b. is always the same as the nominal rate.
 - c. is the percentage increase in the lender's purchasing power that results from making the loan.
 - d. decreases as the inflation rate increases.
29. In general, a higher-than-anticipated inflation rate
 - a. helps everyone.
 - b. hurts everyone.
 - c. helps creditors and harms debtors.
 - d. helps debtors and harms creditors.
30. A singular important link between politics and economics in countries that are attempting to increase their economic growth rates is that
 - a. democracies are more productive than non democracies.
 - b. democracies must constantly make difficult budgetary choices.
 - c. political instability is incompatible with long-term private investment.
 - d. conservative governments tend to focus development on military industries.

國立中山大學九十二學年度轉學生招生考試試題

科目：經濟學【政經系三年級】

共 5 頁 第 4 頁

31. If the government budget deficit increases, the
 - a. supply of loans increases and the equilibrium interest rate increases.
 - b. supply of loans increases and the equilibrium interest rate decreases.
 - c. demand for loans increases and the equilibrium interest rate decreases.
 - d. demand for loans increases and the equilibrium interest rate increases.

32. Steve bought fire insurance for his house for an amount that was greater than his house was worth, then became careless about leaving burning cigarettes around. This is an example of
 - a. an optimal contract.
 - b. diversification.
 - c. moral hazard.
 - d. aggregate risk.

33. Efficiency wages are
 - a. lower than market wages paid by employers to increase profitability.
 - b. higher than market wages paid by employers to increase productivity.
 - c. government-determined minimum wages set to protect workers from unfair employers.
 - d. negotiated by unions when officials are interested in trimming work forces.

34. If there is a recession, the central bank would most likely
 - a. encourage banks to provide loans by lowering the discount rate.
 - b. encourage banks to provide loans by raising the discount rate.
 - c. restrict bank lending by lowering the discount rate.
 - d. restrict bank lending by raising the discount rate.

35. Some economists feel inflation is bad
 - a. because it reduces real GDP so much.
 - b. only if it is steady.
 - c. because it redistributes income arbitrarily.
 - d. only if it is anticipated.

36. When news reporters blame inflation on monopoly sellers, or on greed, they
 - a. are correctly distinguishing between relative prices and the level of prices.
 - b. are confusing the level of prices with the rate of change of prices.
 - c. are identifying the major cause of inflation in the United States.
 - d. None of the above are correct.

37. If one country has a lower inflation rate than other countries, its
 - a. currency tends to appreciate.
 - b. currency tends to depreciate.
 - c. real interest rate will be higher than in other countries.
 - d. nominal interest rate will be higher than in other countries.

38. Crowding out caused by government budget deficits will lead to
 - a. an increase in the real exchange rate.
 - b. a decrease in the real exchange rate.
 - c. no change in the real exchange rate.
 - d. a devaluation in a nation's currency.

39. Many economists believe that the severity of the Great Depression was due to
 - a. a flood of imported goods brought about by tariff reductions.
 - b. the failure of the Federal Reserve to prevent a large drop in the money supply.
 - c. the huge budget deficits of the federal government.
 - d. hyperinflation that occurred following World War I.

40. Which of the following will cause stagflation?
 - a. an increase in the money supply
 - b. an increase in oil prices
 - c. a decrease in the money supply
 - d. technical progress

國立中山大學九十二學年度轉學生招生考試試題

科目：經濟學【政經系三年級】

共 2 頁 第 2 頁

41. To say that nominal prices are sticky means
 - a. the average price level seldom changes.
 - b. relative prices seldom change.
 - c. it takes at least one year for prices to change to a new equilibrium level.
 - d. it takes time for prices to adjust to equilibrium.
42. The long-run effect of an increase in government spending is to raise
 - a. both real output and the price level.
 - b. real output and lower the price level.
 - c. real output and leave the price level unchanged.
 - d. the price level and leave real output unchanged.
43. In the short-run macro model, an open-market purchase of bonds by the Fed will
 - a. raise the interest rate, reduce spending, and increase output.
 - b. raise the interest rate, reduce spending, and decrease output.
 - c. lower the interest rate, reduce spending, and decrease output.
 - d. lower the interest rate, increase spending, and increase output.
44. Which of the following is not true for the crowding-out effect?
 - a. Federal budget deficits increase interest rates, which reduces investment spending.
 - b. Crowding out reduces the ability of fiscal policy to combat a recession.
 - c. If the government spends more on education, ceteris paribus, households may be forced to spend less on new homes.
 - d. Crowding out occurs especially when the economy is in a deep recession and people are not spending all the available money.
45. Government spending on infrastructure
 - a. increases aggregate demand but not aggregate supply.
 - b. increases productivity of private business firms and hence aggregate supply.
 - c. cannot affect aggregate demand because the money does not go to households.
 - d. shifts the long-run aggregate supply curve to the left.
46. Unlike discretionary fiscal policy, automatic stabilizers consist of
 - a. deliberate changes in government spending to counteract recession and inflation.
 - b. deliberate changes in household taxes to counteract recession and inflation.
 - c. deliberate changes in corporation income taxes to counteract recession and inflation.
 - d. changes in government spending and tax revenues that occur automatically as the economy fluctuates.
47. As prices adjust to a change in economic conditions, the
 - a. aggregate demand curve becomes horizontal.
 - b. aggregate demand curve becomes vertical.
 - c. Phillips curve and the aggregate supply curves become vertical.
 - d. Phillips curve and the aggregate supply curves become horizontal.
48. An increase in expected inflation will shift
 - a. both the short-run and the long-run Phillips curves to the right.
 - b. only the short-run Phillips curve to the right.
 - c. only the long-run Phillips curve to the right.
 - d. the short-run Phillips curve to the right and increase the slope of the long-run Phillips curve.
49. Ongoing inflation means the central bank must respond to
 - a. an upward-shifting AS curve.
 - b. a downward-shifting AS curve.
 - c. changing interest rate targets.
 - d. a lower real interest rate.
50. According to supply-side economists, lowering corporate income taxes
 - a. results in higher wages without creating higher levels of labor productivity.
 - b. creates greater income equality.
 - c. checks the expansion of GDP and employment.
 - d. stimulates investment and spurs on economic growth.