

※ 注意：請於試卷內之「選擇題作答區」依序作答。

- 請依題號順序於「選擇題作答區」內作答。
 - 單選題, 共 25 題, 每題 4 分。
1. Rebecca has a utility function $U(C_1, C_2) = C_1^{1/2} + 0.80 C_2^{1/2}$, where C_1 is her consumption in period 1 and C_2 is her consumption in period 2. Her income in period 1 is 3 times as large as her income in period 2. At what interest rate will she choose to consume the same amount in period 1 as in period 2?
 - (a) 0.75
 - (b) 0.13
 - (c) 0.25
 - (d) 0
 - (e) 0.38
 2. Cristina consumes only goods X and Y . Her income is \$600 and her utility function is $U(X, Y) = \max(X, Y)$, where X is the number of units of X she consumes and Y is the number of units of Y she consumes. The price of good Y is 1. The price of good X used to be $1/2$ but is now 2. The equivalent variation of this price change for Cristina is
 - (a) \$300.
 - (b) \$600.
 - (c) \$150.
 - (d) \$800.
 - (e) None of the above.
 3. The market for tennis shoes has a horizontal supply curve and a linear, downward-sloping demand curve. Currently the government imposes a tax of t on every pair of tennis shoes sold and does not tax other goods. The government is considering a plan to double the tax on tennis shoes, while leaving other goods untaxed. If the tax is doubled, then
 - (a) the total deadweight loss caused by the doubled tax will be exactly twice the original deadweight loss.
 - (b) the total deadweight loss caused by the doubled tax will be more than twice the original deadweight loss.
 - (c) the total deadweight loss caused by the doubled tax will be less than twice the original deadweight loss.
 - (d) to know if doubling the tax would more than double the deadweight loss, we would have to know the slope of the demand curve.
 - (e) None of the above.

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4. A city has two major league baseball teams, A and B. The number of tickets sold by either team depends on the price of the team's own tickets and the price of the other team's tickets. If team A charges P_A for its tickets and team B charges P_B for its tickets, then ticket sales, measured in hundreds of thousands per season, are $10 - 2P_A + P_B$ for team A and $20 + P_A - 2P_B$ for team B. The marginal cost of an extra spectator is zero for both teams. Each team believes the other's price is independent of its own choice of price, and each team sets its own price so as to maximize its revenue. What price do they charge per ticket?
- (a) Team A charges 4 and team B charges 6.
 - (b) Team A charges 6 and team B charges 5.
 - (c) Team A charges 5 and team B charges 8.
 - (d) Team A charges 4 and team B charges 12.
 - (e) None of the above.
5. The production function of a competitive firm is described by the equation $Q = 8X_1^{1/2}X_2^{1/2}$. The factor prices are $p_1 = \$1$ and $p_2 = \$4$ for X_1 and X_2 respectively, and the firm can hire as much of either factor it wants at these prices. The firm's marginal cost is
- (a) increasing.
 - (b) decreasing.
 - (c) constant and equal to 3.
 - (d) constant and equal to 0.50.
 - (e) None of the above.
6. A firm's production function is $Q(X_1, X_2) = (\min\{X_1, 5X_2\})^{1/2}$. If the price of factor 1 is $W_1 = \$5$ per unit and the price of factor 2 is $W_2 = \$25$ per unit, then its supply function is:
- (a) $\max\{W_1, 5W_2\}P$.
 - (b) $\min\{W_1, 5W_2\}P$.
 - (c) $P/20$.
 - (d) $10P$.
 - (e) $\min\{5P, 125P\}P$.

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7. A monopolist has the total cost function $C(Q) = 800 + 8Q$. The inverse demand function is $P = 80 - 6Q$, where prices and costs are measured in dollars. If the firm is required by law to meet demand at a price equal to its marginal costs,
- (a) the firm's profits will be zero.
 - (b) the firm will lose \$400.
 - (c) the firm will make positive profit but not as much profit as it would make if it were allowed to choose its own price.
 - (d) the firm will lose \$800.
 - (e) the firm will lose \$480.
8. Robinson Crusoe has exactly 10 hours per day to spend gathering coconuts or catching fish. He can catch 3 fish per hour or he can pick 6 coconuts per hour. His utility function is $U(F, C) = F \cdot C$, where F is his consumption of fish and C is his consumption of coconuts. If he allocates his time in the best possible way between catching fish and picking coconuts, his consumption will be the same as it would be if he could buy fish and coconuts in a competitive market where the price of coconuts is \$1.
- (a) His income is \$60 and the price of fish is \$0.33.
 - (b) His income is \$90 and the price of fish is \$3.
 - (c) His income is \$60 and the price of fish is \$2.
 - (d) His income is \$30 and the price of fish is \$3.
 - (e) His income is \$45 and the price of fish is \$0.33.
9. Two players are engaged in a game of Chicken. There are two possible strategies, Swerve and Drive Straight. A player who chooses to Swerve is called Chicken and gets a payoff of zero, regardless of what the other player does. A player who chooses to Drive Straight gets a payoff of 32 if the other player swerves and a payoff of -48 if the other player also chooses to Drive Straight. This game has two pure strategy equilibria and
- (a) two mixed strategies in which players alternate between swerving and driving straight.
 - (b) a mixed strategy equilibrium in which each player swerves with probability 0.60 and drives straight with probability 0.40.
 - (c) a mixed strategy equilibrium in which one player swerves with probability 0.60 and the other swerves with probability 0.40.
 - (d) a mixed strategy in which each player swerves with probability 0.30 and drives straight with probability 0.70.
 - (e) no mixed strategies.

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10. An airport is located next to a housing development. Profits of the airport are $22X - X^2$ and profits of the developer are $26Y - Y^2 - XY$, where X is the number of planes that land per day and Y is the number of houses in the housing development. Let H_1 be the number of houses built if a single profit-maximizing company owns the airport and the housing development. Let H_2 be the number of houses built if the airport and the housing development are operated independently and the airport has to pay the developer the total "damages" XY done by the planes to the developer's profits. Then
- (a) $H_1 = H_2 = 10$.
 - (b) $H_1 = 10$ and $H_2 = 13$.
 - (c) $H_1 = 13$ and $H_2 = 10$.
 - (d) $H_1 = 12$ and $H_2 = 12$.
 - (e) $H_1 = 10$ and $H_2 = 16$.
11. Albert, Bill, and Chris all consume crackers and music. Crackers are a pure private good and music is a pure public good. Their utility functions are $U_A(C_A, m) = C_A \cdot m$, $U_B(C_B, m) = C_B \cdot m$, $U_C(C_C, m) = C_C \cdot m$, where C_A is Albert's cracker consumption, C_B is Bill's cracker consumption, C_C is Chris's cracker consumption, and m is the amount of music jointly consumed by all three of them. Music is measured in hours. Crackers cost \$1 each. Music costs \$10 an hour. Albert's wealth is \$30, Bill's wealth is \$50, and Chris's wealth is \$20. What is the efficient amount of music for them to consume?
- (a) 2 hours
 - (b) 3 hours
 - (c) 4 hours
 - (d) 5 hours
 - (e) 6 hours
12. Suppose that low-productivity workers all have marginal products of 10 and high-productivity workers all have marginal products of 12. The community has equal numbers of each type of worker. The local community college offers a course in microeconomics. High-productivity workers think taking this course is as bad as a wage cut of \$5, and low-productivity workers think it is as bad as a wage cut of \$9.
- (a) There is no separating equilibrium, but there is a pooling equilibrium in which everybody is paid \$11.
 - (b) There is a separating equilibrium in which high-productivity workers take the course and are paid \$12 and low-productivity workers do not take the course and are paid \$10.
 - (c) There is no separating equilibrium and no pooling equilibrium.
 - (d) There is a separating equilibrium in which high-productivity workers take the course and are paid \$17 and low-productivity workers do not take the course and are paid \$10.
 - (e) There is a separating equilibrium in which high-productivity workers take the course and are paid \$12 and low-productivity workers are paid \$11.

13. If the Friedman rule for long-term monetary policy were implemented, the result would be
- (a) inflation.
 - (b) neither inflation nor deflation.
 - (c) deflation.
 - (d) hyperinflation.
 - (e) superinflation.
14. Under a flexible exchange rate, an increase in the domestic money supply leads to _____ in domestic interest rate and _____ of the domestic currency.
- (a) an increase; a depreciation
 - (b) an increase; an appreciation
 - (c) a decrease; a depreciation
 - (d) a decrease; an appreciation
 - (e) no change; an appreciation
15. The key effect of the current account surplus is
- (a) to smooth consumption.
 - (b) to destabilize the economy.
 - (c) to smooth aggregate output.
 - (d) to improve fiscal policy.
 - (e) none of the above.
16. Seigniorage is government revenue raised by
- (a) a tax on transactions.
 - (b) issuance of money.
 - (c) issuance of treasury bonds.
 - (d) lump-sum taxation.
 - (e) none of the above.
17. The assumption that current-period labor supply is positively related to the current-period real wage is justified as long as the
- (a) income effect dominates the substitution effect in the short run.
 - (b) income effect dominates the substitution effect in the long run.
 - (c) substitution effect dominates the income effect in the short run.
 - (d) substitution effect dominates the income effect in the long run.
 - (e) none of the above.
18. An interest rate spread is
- (a) the difference between long-term and short-term interest rates.
 - (b) the difference between lending and borrowing interest rates.

- (c) the difference between nominal and real interest rates.
 (d) the difference between public and commercial interest rates.
 (e) none of the above.
19. In a two-period intertemporal model, the desire to smooth consumption is reflected in
- (a) the consumer's budget constraint.
 (b) the curvature in a consumer's indifference curves.
 (c) choice between present and future.
 (d) the production possibilities frontier.
 (e) none of the above.
20. Which of the following is not a reason for differences in total factor productivity across countries?
- (a) differences in the size of population
 (b) learning by doing
 (c) barriers to the adoption of Previous Edition technology
 (d) inefficient allocation of factors of production across firms in some countries
 (e) none of the above.
21. If a macroeconomic variable tends to aid in predicting the future path of real GDP, it is said to be a
- (a) convenient variable.
 (b) coincident variable.
 (c) leading variable.
 (d) lagging variable.
 (e) none of the above.

[Questions 22–25] Consider a two-period economy in which the representative consumer maximizes the utility function

$$U(c_t, c_{t+1}) = \log c_t + \beta \log c_{t+1}$$

with budget constraints:

$$\begin{aligned} c_t + s_t &= Y_t - T_t \\ c_{t+1} &= Y_{t+1} - T_{t+1} + (1+r)s_t \end{aligned}$$

where s_{t+1} denotes saving and r represents the real interest rate. T_t and T_{t+1} are lump-sum taxes. Government services are financed by taxes and the issue of bonds, B_t .

$$\begin{aligned} G_t &= T_t + B_t \\ G_{t+1} + (1+r^G)B_t &= T_{t+1} \end{aligned}$$

22. Let W denote the lifetime income. Then

- (a) $W = (Y_t - T_t) + (Y_{t+1} - T_{t+1})$
- (b) $W = Y_t - T_t + (1+r)(Y_{t+1} - T_{t+1})$
- (c) $W = (1+r)(Y_t - T_t) + Y_{t+1} - T_{t+1}$
- (d) $W = Y_t - T_t + \frac{Y_{t+1} - T_{t+1}}{1+r}$
- (e) $W = \frac{Y_t - T_t}{1+r} + Y_{t+1} - T_{t+1}$

23. The level of optimal consumption in the two periods (c_t^*, c_{t+1}^*) is

- (a) $\left(\frac{\beta W}{1+\beta}, \frac{\beta(1+r)W}{1+\beta}\right)$
- (b) $\left(\frac{(1-\beta)W}{\beta}, \frac{\beta(1+r)W}{1+\beta}\right)$
- (c) $\left(\frac{W}{1+\beta}, \frac{(1+r)W}{1+\beta}\right)$
- (d) $\left(\frac{(1-\beta)W}{\beta}, \frac{(1+\beta)(1+r)W}{\beta}\right)$
- (e) none of the above

24. Assume that $r^G = r$. Now suppose that the government cuts taxes in the current period, so T_t falls by some amount $\Delta\tau > 0$, but government spending is unchanged. Such a policy will let the level of optimal consumption be (c_t^{**}, c_{t+1}^{**}) .

- (a) $c_t^{**} > c_t^*$ and $c_{t+1}^{**} > c_{t+1}^*$
- (b) $c_t^{**} < c_t^*$ and $c_{t+1}^{**} < c_{t+1}^*$
- (c) $c_t^{**} > c_t^*$ and $c_{t+1}^{**} < c_{t+1}^*$
- (d) $c_t^{**} < c_t^*$ and $c_{t+1}^{**} > c_{t+1}^*$
- (e) $c_t^{**} = c_t^*$ and $c_{t+1}^{**} = c_{t+1}^*$

25. Given the tax cut mentioned above, but now assume that $r^G < r$. Such a policy will let the level of optimal consumption be $(c_t^{***}, c_{t+1}^{***})$.

- (a) $c_t^{***} > c_t^*$ and $c_{t+1}^{***} > c_{t+1}^*$
- (b) $c_t^{***} < c_t^*$ and $c_{t+1}^{***} < c_{t+1}^*$
- (c) $c_t^{***} > c_t^*$ and $c_{t+1}^{***} < c_{t+1}^*$
- (d) $c_t^{***} < c_t^*$ and $c_{t+1}^{***} > c_{t+1}^*$
- (e) $c_t^{***} = c_t^*$ and $c_{t+1}^{***} = c_{t+1}^*$

試題隨卷繳回