

考生作答須知：本考科共 32 題選擇題，第 1~30 題，每題 3 分；第 31~32 題，每題 5 分；滿分 100 分。請將唯一最正確的答案填入選擇題作答區。

1. Among economists listed below, who have (has) just won the Nobel Laureates in Economics in 2017?
A. Leonid Hurwicz, Eric S. Maskin, and Roger B. Myerson
B. Richard Thaler
C. John C. Harsanyi, John F. Nash Jr., and Reinhard Selten
D. Edmund S. Phelps
2. If utility is given by $U(x, y) = \text{Min}\{x, 3y\}$, then the bundle (3,2) provides the same utility as the bundle
A. (1, 3) B. (4, 1) C. (4, 4) D. (4, 2)
3. If an individual's utility function is given by $U(x, y) = \sqrt{xy}$ and the income and prices of goods are respectively, $I = 100, p_x = 4, p_y = 1$, his or her preferred consumption bundle (x, y) will be:
A. (12.5, 50) B. (20, 20) C. (15, 40) D. (10, 60)
4. As long as marginal cost is below average cost, the average cost will be
A. rising. B. falling. C. constant. D. changing ambiguously.
5. Let a price-taking firm's production function be given by $q = \sqrt{l}$, in which l denotes the labor used in the production. Variables p and w denotes the price of the good and the wage rate respectively. The supply function of the firm is given by
A. $q = p/2w$. B. $q = 2pw$. C. $q = 2p/w$. D. $q = 2w/p$.

6. Two identical firms face market demand $P(Q) = 20 - Q$ and have total costs

$$C(q_i) = 2q_i \quad (i = 1, 2). \text{ The Cournot equilibrium is given by } q_1^* = q_2^* =$$

- A. 6. B. 5. C. 4. D. 7.

7. A monopsonist that faces a labor supply curve of the form $L^s = 4w$ and has a constant marginal revenue product of 100 per unit of labor, will opt for the following, (w, L) combination

- A. $(w = 40, L = 160)$. B. $(w = 50, L = 200)$. C. $(w = 60, L = 240)$.
D. $(w = 70, L = 280)$.

8. The "free rider problem" of public goods refers to

- A. individuals' refusal to pay taxes.
B. individuals' overuse of collective goods.
C. individuals' attempts to hide their preferences for collective goods and to avoid paying for them.
D. the infinite elasticity of individuals' demands for public goods.

Use the following message to answer questions 9 and 10.

There are two used car dealerships. The first, Bob's Cars, always sells high-quality cars. It costs Bob's \$10,000 to buy and service each car that it sells. The second dealership, Peter's Motors, always sells lower-quality cars. It costs Peter's only \$7,000 for each car that it sells. If consumers knew the quality of the used cars, they would pay \$12,000 for Bob's cars and only \$9000 for Peter's cars.

If consumers do not know the quality of each dealership's cars, they believe there is a 50-50 chance of ending up with a high-quality car, and are thus willing to pay \$10,500 for a car. Let the profits of Bob and Peter be denoted respectively by (π_B, π_P) .

Suppose that Bob will offer a bumper-to-bumper warranty on all cars he sells. A warranty lasting Y years will cost Bob $\$500Y$, and if Peter tries to offer the same warranty, it will cost Peter $\$1000Y$.

9. Suppose that Bob offers a one-year warranty.

- A. If Peter does not offer any warranty, then $(\pi_B = 2,000, \pi_P = 2,000)$.
B. If Peter does not offer any warranty, then $(\pi_B = 1,500, \pi_P = 2,000)$.
C. If Peter also offers a one-year warranty, then $(\pi_B = 2,000, \pi_P = 2,000)$.
D. If Peter also offers a one-year warranty, then $(\pi_B = 2,000, \pi_P = 1,000)$.

10. If you were advising Bob, how long a warranty would you urge him to offer?

- A. 2-year. B. 2.5-year. C. 1.5-year. D. 3-year.

In Figure 1 below, MEC curve is the marginal external cost, which denotes the marginal pollution cost made by the production of the firm. MC curve is the marginal cost of the firm and MSC curve is the marginal social cost. Furthermore, MSB is the marginal social benefit curve (demand curve) in the market. In Figure 1, answer the following questions 11 and 12.

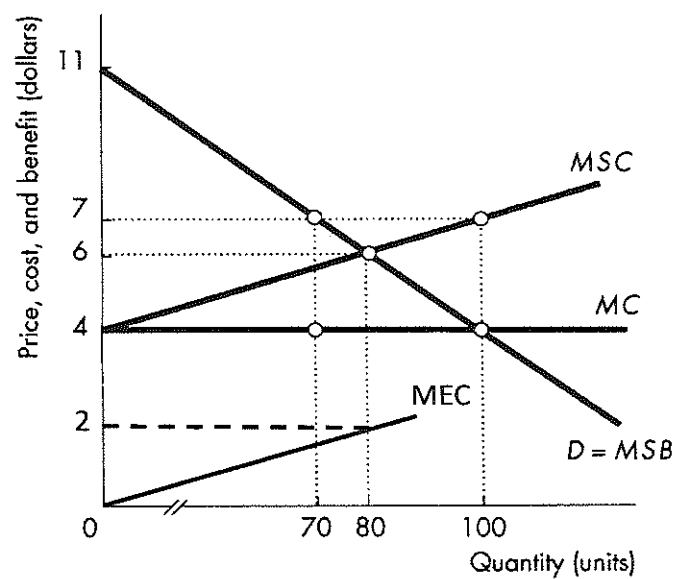


Figure 1

11. Choose the correct statement.

- A. If there are no property rights and no regulation on the pollution, the market equilibrium output will be 80.
 B. If the Coase Theorem applies, the equilibrium output will be 80.
 C. The efficient output will be 100.
 D. If the Coase Theorem applies and the property right is assigned to the firm, the equilibrium output will be 100.

12. If the Coase Theorem applies and the property right is assigned to the firm,

- A. the firm produces at 80 and receives \$6 for each unit of output.
 B. the firm produces at 80 and pays \$2 for each unit of output to the consumers.
 C. the firm produces at 100 and pays \$3 for each unit of output to the consumers.
 D. the firm produces at 100 and receives \$7 for each unit of output.

Use the following message to answer questions 13 and 14.

In a perfectly competitive market, assume that the market demand is denoted by $P(Q) = 20 - Q$ and the marginal private cost is denoted by $C(Q) = 3Q$. Let the marginal external cost be $MEC = Q$.

13. Under the regime without any regulation, the market equilibrium will occur at
A. $(P=16, Q=4)$. B. $(P=15, Q=5)$. C. $(P=8, Q=12)$.
D. $(P=6, Q=14)$.
14. Suppose that the government imposes a pollution tax per unit of output, denoted by t . Then the Pigovian tax rate t should be
A. $(t=7)$. B. $(t=5)$. C. $(t=6)$. D. $(t=4)$.
15. Which of the following expenditures associated with the production of a new high-performance SUV will be directly included in GDP?
A. the sale of bonds to finance the construction of the assembly plant.
B. the purchase of used welding robots to assemble vehicles.
C. the purchase of new machine tools to manufacture the engines.
D. the purchase of new tires to be installed on the new vehicles.
16. The labor force includes
A. only the number of people employed.
B. discouraged workers.
C. only the number of people unemployed.
D. both employed and unemployed workers.
17. Suppose the working age population in country A is 100 million people. If 25 million of these people are NOT in the labor force, the a equals b .
A. $a = \text{unemployment rate}; b = 25/100 \times 100$
B. $a = \text{unemployment rate}; b = 25/75 \times 100$
C. $a = \text{labor force}; b = 75 \text{ million}$
D. $a = \text{labor force}; b = 25/100 \times 100$
18. In January 2017, Bob's company-owned machines valued at \$100 million. During the year, the market value of the equipment fell by 30 percent. During 2017, Bob spent \$1 million on new machines. During 2017, Bob's gross investment totaled
A. \$100 million. B. \$30 million. C. \$31 million. D. \$1 million.

19. If a bank's net worth is negative, then the bank definitely will be
A. liquid. B. illiquid. C. insolvent. D. solvent.
20. When the inflation rate is zero, the
A. real interest rate equals the nominal interest rate.
B. real interest rate is less than the nominal interest rate.
C. nominal interest rate is zero.
D. real interest rate is greater than the nominal interest rate.
21. Which of the following does NOT describe a function of money?
A. hedge against inflation B. a unit of account C. a medium of exchange
D. a store of value
22. The quantity of real GDP supplied depends on the
A. level of aggregate demand.
B. quantity of labor, the quantity of capital, and the state of technology.
C. quantity of capital, bonds, and stocks.
D. price level, the unemployment rate, and the government expenditures on goods and services.
23. In the macroeconomic short run,
A. actual real GDP may be less than or more than potential GDP.
B. the unemployment rate is zero.
C. by definition, the economy is always moving away from full employment.
D. actual real GDP always equals potential GDP.
24. In the macroeconomic long run,
A. there is full employment and real GDP is equal to potential GDP.
B. there is full employment with no unemployment.
C. output always is above potential GDP.
D. GDP always is below potential GDP.
25. When the price level rises, the long-run aggregate supply curve _____.
A. shifts rightward. B. does not shift. C. shifts upward. D. shifts leftward.
26. The short-run aggregate supply curve and the long-run aggregate supply curve
A. are perpendicular to one another at potential GDP.
B. are parallel at potential GDP.

- C. intersect at potential GDP.
 - D. intersect at GDP less than potential GDP.
27. Suppose the price level, the money wage, and the price of all other resources rise by 10 percent. This set of changes leads to
- A. an upward movement along the short-run aggregate supply curve.
 - B. a downward movement along the long-run aggregate supply curve.
 - C. an upward movement along the long-run aggregate supply curve.
 - D. a leftward shift in the long-run aggregate supply curve.
28. If there are no taxes or imports and marginal propensity to consume $MPC = 0.75$, the multiplier equals
- A. 0.25.
 - B. 1.33.
 - C. 4.
 - D. 1.25.
29. Demand-pull inflation starts with
- A. an increase in aggregate demand.
 - B. a decrease in aggregate demand.
 - C. an increase in short-run aggregate supply.
 - D. a decrease in short-run aggregate supply.
30. Cost-push inflation can be started by
- A. a decrease in the money wage rate.
 - B. an increase in the money prices of raw materials.
 - C. an increase in the quantity of money.
 - D. a decrease in government expenditure on goods and services.
31. The current growth rate of real GDP per person in country A is 7 percent a year. How long will it take to double real GDP per person?
- A. 5 years
 - B. 7 years
 - C. 28 years
 - D. 10 years
32. Neoclassical growth theory predicts that
- A. advances in technology increase the productivity of capital, which leads to an increase in investment and rising real GDP per person.
 - B. advances in technology are a result of discoveries motivated by the pursuit of profits.
 - C. growth in real GDP can increase without any increase in investment.
 - D. growth in real GDP can continue indefinitely.