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2020 Taiwanese Economics Olympiad

Preliminary – Round 1: Literacy of Economics and Finance

Question Booklet

Time Saturday, March 28, 2020, 10:00 to 11:30 (90 minutes)

Location Taipei Fuhsing Private School, Taipei, Taiwan

Instructions

- Fill in your contestant number in the boxes at the top.
- Use only a blue or black pen or pencil.
- Answer all questions on the answer sheet.
- Do all rough work in the question booklet.

Information

- This is an individual-based round.
- The number of questions is 30. All answers will be graded (4 points for a correct answer, minus 1 point for an incorrect answer, and zero points for no answer).
- If not stated otherwise, consider all goods, services, and assets infinitely divisible.
- Numbers of firms and people may be only integers.
- You may leave the examination venue more than 60 minutes after this round begins.

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1. Which of the following places is the origin of economics?
 - (A) Chicago
 - (B) Scotland
 - (C) Vienna
 - (D) Stockholm

2. Alan, Bob, and Carlos are woodworkers who all make tables and chairs. In one month, Alan can make 6 tables or 18 chairs, whereas Bob can make 6 tables or 12 chairs, and Carlos can make 4 tables or 4 chairs. Who has the lowest opportunity cost of making tables?
 - (A) Alan
 - (B) Bob
 - (C) Alan and Bob
 - (D) Carlos

3. A decrease in the price of a good will
 - (A) increase demand
 - (B) decrease demand
 - (C) increase quantity demanded
 - (D) decrease quantity demanded

4. Which of the following events may NOT result in a rising equilibrium price of certain goods?
 - (A) When an effective price ceiling is set
 - (B) When there is a loss caused by a natural disaster
 - (C) When the government opens up exports of the goods
 - (D) When the price of substitutes goods rises

5. A supermarket decides to reduce the price of its own brand of baked beans as a special offer for one week only. During this week, it discovers that its total revenue from the sale of own-brand baked beans increases. This indicates that
 - (A) the demand for its own brand of baked beans is elastic with respect to price
 - (B) the demand for its own brand of baked beans is elastic with respect to income
 - (C) the demand for its own brand of baked beans is inelastic with respect to price
 - (D) its own brand of baked beans is an inferior good

6. A key characteristic of a competitive market is that
 - (A) producers sell nearly identical products
 - (B) firms minimize total costs
 - (C) firms have price setting power
 - (D) government antitrust laws regulate competition



7. An oligopoly with a dominant price leader will produce a level of output
- (A) between that which would prevail under perfect competition and that which a monopoly would choose in the same industry
 - (B) between that which would prevail under competition and that which a monopolistic competitor would choose in the same industry
 - (C) equal to what a monopolist would choose in the same industry
 - (D) the same as that which would prevail under competition
8. All externalities
- (A) cause markets to fail to allocate resources efficiently
 - (B) cause equilibrium prices to be too high
 - (C) benefit producers at the expense of consumers
 - (D) cause equilibrium quantity to be too high
9. Which of the following goods is the best example of a public good?
- (A) Online TV service provided by Netflix
 - (B) Garbage-collection services that are provided by a municipal government
 - (C) Music that is broadcast over the airwaves by a privately-owned FM radio station
 - (D) Electricity provided by renewable energy sources
10. Of the following countries, which country's government collects the largest amount of tax revenue as a percentage of that country's total income?
- (A) Denmark
 - (B) Japan
 - (C) Taiwan
 - (D) United States
11. A binding price ceiling
- (A) causes a surplus
 - (B) causes a shortage
 - (C) increases consumers' surplus
 - (D) increases producers' surplus
12. Minimum-wage laws
- (A) affect highly-educated workers more than high school dropouts
 - (B) cause labor shortages, which further raise wages above equilibrium
 - (C) reduce unemployment
 - (D) create unemployment
13. Which of the following statements is NOT considered a disadvantage of GDP measurement?
- (A) GDP measurement does not take different price levels in different countries into account.
 - (B) GDP measurement does not reflect living quality.
 - (C) GDP measurement does not include the product of household labor.
 - (D) GDP measurement does not include the product of foreign labor.



14. Which of the following is NOT a factor of the rise of real GDP in a country?
- (A) Advance of technology
 - (B) Rise of the education level
 - (C) Rise of the price level
 - (D) Increase of investment
15. Which of the following statements may NOT be a result of steady inflation?
- (A) Steady inflation can make it easier to conduct price negotiations.
 - (B) Steady inflation can facilitate economic growth.
 - (C) Steady inflation can raise unemployment rates.
 - (D) Steady inflation can help redistribute income.
16. Trade can make everybody better off because it
- (A) increases cooperation among nations
 - (B) allows people to specialize according to comparative advantages
 - (C) increase prices
 - (D) reduces competition among domestic companies
17. Which term can be used to describe the following situation: “*firms’ marginal revenue is not equal to the price of the goods, and thus they do not equate the marginal cost and the price*”?
- (A) Externalities
 - (B) Monopoly/oligopoly power
 - (C) Ignorance and uncertainty
 - (D) Public goods and services
18. Country T produces only apples (A) and bananas (B). The production probability frontier is given by $A^2 + B^2 = 2500$. Which of the following statements is false?
- (A) T can produce 50 apples and 0 bananas.
 - (B) T can produce 40 apples and 30 bananas.
 - (C) T can produce 35 apples and 35 bananas.
 - (D) T can produce 25 apples and 45 bananas.
19. Empirical studies show that the typical shape of firms’ long-run average cost curves is
- (A) sloping up to the right
 - (B) sloping down to the right
 - (C) sloping down to the right and then levelling off
 - (D) horizontal



20. Trump Machinery is analyzing a proposed project that is expected to sale 2,450 units, with an error range of $\pm 8\%$. The expected variable cost per unit is \$246, and the expected fixed costs are \$309,000. Both cost estimates are considered accurate within a $\pm 3\%$ error range. The depreciation expense is \$106,000. The sales price is estimated to be \$599 per unit within a $\pm 2\%$ error range. What is the amount of the total cost per unit under the worst-case scenario?
- (A) \$448.58
(B) \$404.16
(C) \$394.58
(D) \$366.67
21. Which of the following pairs of causal relations is incorrect?
- (A) Banker's interference in the market – Panic of 1907
(B) Wrong decisions made by governemnt – Great Depression
(C) Change in the exchange rate system – 1997 Asian financial crisis
(D) Inappropriate manipulation of financial products – Great Recession
22. Which of the following is NOT a function of currency?
- (A) Unit of account
(B) Store of value
(C) Deferred payment
(D) A credit indenture
23. The Euro (EUR) is the official currency of 19 of the 27 member states of the European Union. Which of the following is a disadvantage of a single-currency area?
- (A) Elimination of costs of converting currencies
(B) Adjustment to asymmetric shocks (shocks that have different effects on various member countries)
(C) Elimination of uncertainties associated with possible exchange rate realignments and fluctuations within the permitted band
(D) A lower average rate of inflation (provided that the European Central Bank is truly independent from short-term political considerations)
24. In a country, its national income at current prices is \$24 billion and the money supply is \$8 billion in 2019. The national income at base-year prices is \$12 billion. What are the velocity of circulation and the price index, respectively?
- (A) velocity of circulation = 3, price index = 0.5
(B) velocity of circulation = 2, price index = 3
(C) velocity of circulation = 3, price index = 2
(D) velocity of circulation = 0.33, price index = 0.5



25. Since Taiwan is not a member of the International Monetary Fund, the Central Bank of the ROC (Taiwan) tends to control financial flows and sets exchange rate target zones. Which of the following features would be most likely found in this system?
- (a) Currencies would be allowed to fluctuate within bands.
 - (b) These bands would be very narrow, say no more than $\pm 1\%$.
 - (c) Central parity among currencies with Taiwan Dollar would be set so as to maintain it at the “fundamental equilibrium exchange rate.”
 - (d) The central parity would be adjusted very infrequently.
 - (e) There would be “soft buffers,” with exchange rates occasionally allowed to move outside their bands.
- (A) (b) and (d)
(B) (a), (c), and (e)
(C) (a), (b), and (c)
(D) (c) and (d)
26. The Boston Book Inc. has adopted a policy of increasing its annual dividend at a constant rate of 1.35% annually. The company just paid its annual dividend of \$1.84 this year. What will the dividend be after nine years from now?
- (A) \$2.10
(B) \$2.08
(C) \$2.05
(D) \$2.02
27. You own 850 shares of the Taiwan Semiconductor Manufacturing Company’s stock valued at \$53.15 per share. What is the dividend yield if your total annual dividend income is \$1,256?
- (A) 2.78%
(B) 2.67%
(C) 2.13%
(D) 1.83%
28. Which of the following assets is the largest asset item on a commercial bank’s balance sheet?
- (A) Securities
(B) Cash
(C) Loans
(D) Bank Premises



29. If growth is to be funded by internal expansion, the firm will need to increase both its productive capacity (by investment) and the demand for its product (by advertising). Both will require financing. Which of the following ways can be used by a firm to finance such expansion?
- (a) borrowing
 - (b) sales of the land and properties
 - (c) a new issue of shares
 - (d) letting off more employees
 - (e) retained profits.
- (A) (a), (c), and (e)
(B) (a), (b), and (d)
(C) (a), (b), and (c)
(D) (c), (d), and (e)
30. David has a deposit of NT\$100,000 for a five-year investment, and he wishes to receive returns in New Taiwan Dollars (TWD). Which of the following investments is the best for him?
- (A) A time deposit with an annual interest rate of 1%
 - (B) A deposit of US Dollars with an annual interest rate of 3% (exchange rate: 1 USD equals 30 TWD; exchange fee: 1%)
 - (C) Stocks with a 50% chance to rise by 10% together with a 50% chance to decline by 10%
 - (D) A life insurance package that guarantees a return of NT\$115,000 if David has a 95% chance to live 5 more years

End of questions