國立中山大學113學年度金融創新產業碩士專班招生考試試題

科目名稱：經濟學

※本科目依簡章規定「不可以」使用計算機，以下題目包含兩部分，共有單選題及填充題（直接寫下答案，無須過程）。

※請務必順題號在答案紙依序寫下答案，並標註題號。請勿跳號或變動順序。

壹、單選題，每題3分，總分75分

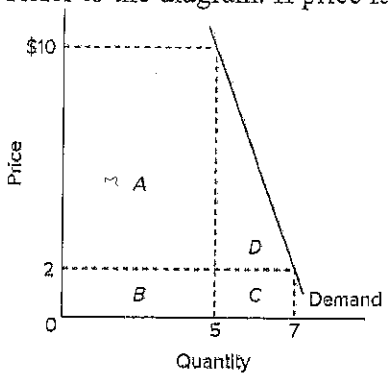
1) A government is considering undertaking a construction project of an increasing scale (ranging from 1, 2, 3, to 4). The estimated marginal costs and marginal benefits of each successive scale of the project are given in the table below.

Project	Marginal Cost (in millions)	Marginal Benefit (in millions)
1	$ 8	$ 11
2	11	13
3	18	17
4	28	23

What is the net benefit of the scale-1 project?

A) $3 million. B) $19 million. C) $8 million. D) $11 million.

2) Refer to the diagram. If price falls from $10 to $2, total revenue



A) rises from $A + B$ to $A + B + D + C$, and demand is elastic.

B) falls from $A + D$ to $B + C$, and demand is inelastic.

C) rises from $C + D$ to $B +$ A, and demand is elastic.

D) falls from $A + B$ to $B + C$, and demand is inelastic.

3) The table shows the total utility data for products X and Y. Assume that the prices of X and Y are $1.5 and $2, respectively, and that consumer income is $9.

Units of X	Total Utility	Units of Y	Total Utility
1	9	1	16
2	15	2	28
3	19	3	36
4	21	4	40
5	22	5	42

How many units of the two products will the consumer buy to get maximum utility?

A) 2 of X and 3 of Y B) 6 of X and 0 of Y C) 1 of X and 4 of Y D) 3 of X and 2 of Y

4) Suppose that at 500 units of output, marginal revenue is $9, marginal cost is $6, and average variable cost is $7. On the basis of this information, we

A) cannot determine whether the firm should produce or shut down in the short run.	B) can say that the firm should continue to produce but reduce output in the short run.	C) can say that this firm is maximizing profits or minimizing losses in the short run.	D) can say that the firm should increase production in the short run.

5) Refer to the demand and cost data for a pure monopolist given in the table.

Output	Price	Total Cost
0	$ 500	$100
1	300	150
2	250	400
3	200	750
4	150	1,150
5	100	1,600

If the monopolist were forced to produce the socially optimal output through the imposition of a ceiling price, the ceiling price would have to be set at

A) $200. B) $250. C) $150. D) $300.

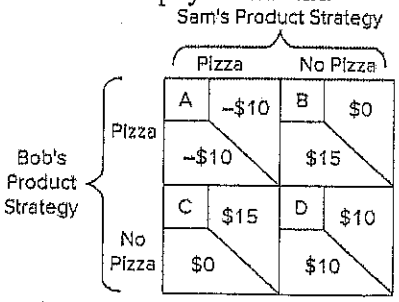
6) Suppose that a monopolistically competitive firm is currently selling 600 units of output at a price of $140 per unit. At 600 units of output, the firm's marginal revenue is $75, its marginal cost is $90, its average total cost is $150, and average variable cost is $80. Based on this information,

A) the monopolist is earning economic profits that could be increased by lowering price and increasing output.	B) the monopolist is earning economic profits that could be increased by raising price and reducing output.	C) the monopolist is incurring economic losses that could be reduced by lowering price and increasing output.	D) the monopolist is incurring economic losses that could be reduced by raising price and reducing output.

7) The government of Kaohsiung provided generous unemployment benefits to all unemployed workers in the city. However, the new government that came into power reduced the amount of unemployment insurance paid to each worker. This increased the average number of hours that unemployed workers spent daily looking for jobs. This suggests that _____ exists in the labor market in Kaohsiung.

A) the tragedy of the commons	B) the problem of moral hazard	C) a positive externality	D) a pecuniary externality

8) Refer to the payoff matrix.



Bob's Burgers and Sam's Sandwiches are competing restaurants in a small town.

Both are considering adding pizza to their line of products. If this is a sequential game but we don't know who moves first, what can we say about the final outcome?

A) There is no Nash equilibrium attainable for this game.

B) Cell A represents the only Nash equilibrium possible for this game.

C) Cell D represents the only Nash equilibrium possible for this game.

D) Cells B and C both represent possible Nash equilibrium outcomes for this game.

9) Suppose there are only three houses on a street. The following table shows each homeowner's willingness to pay for street lights.

	Homeowner 1's Willingness to Pay	Homeowner 2's Willingness to Pay	Homeowner 3's Willingness to Pay
First street light	$400	$300	$710
Second street light	$350	$200	$300
Third street light	$200	$110	$100
Fourth street light	$100	$30	$40

It costs $700 to install a street light. If each homeowner on this street is left to purchase streetlights independently, then Homeowner 1 would purchase _____, Homeowner 2 would purchase _____, and Homeowner 3 would purchase _____ streetlight(s).

A) 1; 1; 2 B) 1; 0; 2 C) 0; 0; 1 D) 0; 0; 2

10) The relationship between prices of good X and the quantity demanded of four products, A–D, is shown in the following table.

	Quantity Demanded	Quantity Demanded	Quantity Demanded	Quantity Demanded
Price of X	Good A	Good B	Good C	Good D
$ 20	24	30	42	120
24	22	35	42	126

Which product(s) listed is (are) complements for good X?

A) C only B) B and D C) A only D) None of these are complements for good X

11) Soohyun and Jiwon live on an island where they are the only two workers. Soohyun can either catch 10 fish or gather 40 pounds of berries each day, and Jiwon can either catch 8 fish or gather 24 pounds of berries each day. Both of them work 200 days per year. At current world prices 1 fish trades for 3.5 pounds of berries. In a closed economy, if the citizens of this island consume 1,200 fish per year, how many pounds of berries can they consume?

A) 12,800 pounds B) 9,200 pounds C) 8,000 pounds D) 4,800 pounds

12) Kate and Ali can live together in a two-bedroom apartment for $650 per month, or they can each rent a one-bedroom apartment for $400 per month. Apart from the rent, they are indifferent between living together and living apart, except for one problem: Kate hates Ali's taste in art. Kate would be willing to pay up to $125 a month to avoid seeing Ali's art. Ali would give up hanging her art on the wall for no less than $325 per month. Which, if any, of the following ways of splitting the

total monthly rent would induce them to live together?

A) Kate pays $240 per month and Ali pays $410 per month.	B) Kate pays $160 per month and Ali pays $490 per month.	C) Kate pays $375 per month and Ali pays $275 per month.	D) There is no way to split the rent to induce them to live together.

13) Suppose that there are two types of houses for sale: those with solid foundations and those with cracked foundations. In all other respects, the two types of houses are identical. Houses with solid foundations are worth $200,000, while those with cracked foundations are worth $200,000 minus the $20,000 to fix the crack, or $180,000. Sellers know which type of house they have, but buyers cannot detect whether the foundation has a crack. Suppose that 80 percent of the houses for sale have a solid foundation and 20 percent of the houses for sale have a cracked foundation. How could the owner of a house with a solid foundation credibly signal to potential buyers that the house has a solid foundation?

A) Keep the house on the market for $200,000 because eventually buyers will catch on.	B) Simply tell potential buyers that the foundation is solid.	C) Lower the asking price to $196,000.	D) Offer a warranty to fix any foundation problems that develop in the next 12 months.

14) Males major in engineering much more frequently than females. Starting salaries for engineers (male or female) are much higher than average. As a result, the observed gender wage gap for all college graduates will be _____ than the gender wage gaps in specific majors because _____.

A) larger; of employer discrimination	B) smaller; males and females choose different majors	C) larger; of academic discrimination	D) larger; males and females choose different majors

15) Suppose that average labor productivity in Country A is $6,000, and that Countries A and E have the same real GDP per capita. Based on the information in the table, what must be the average labor productivity in Country E?

Country	Population (millions)	Share of Population Employed (%)
A	100	60
B	150	55
C	75	50
D	250	45
E	95	40

A) 9,000 B) 9,500 C) 5,500 D) 7,750

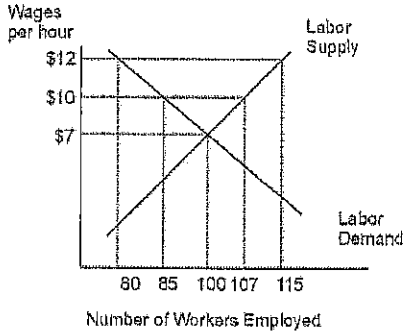
16) Given the following data for the economy, compute the value of net exports.

Government purchases of goods and services	30
Consumption expenditures	120
Exports	15
Imports	27
Change in inventories	−17
Construction of new homes and apartments	25

Sales of existing homes and apartments	18
Government payments to retirees	35
Business fixed investment	29

A) −21 B) 15 C) 12 D) −12

17) Based on the accompanying labor-market diagram, if the minimum wage is decreased from $10 to $7 per hour, the number of unemployed workers will decrease by _____ workers.



A) 9 B) 22 C) 0 D) 15

18) Holding other factors constant, if a tax increase moves the government budget from deficit to surplus, then the real interest rate will _____ and the equilibrium quantity of national saving and investment will ____.

A) increase; increase B) decrease; decrease C) increase; not change D) decrease; increase

19) If the Central Bank of Macroland puts an additional 3,000 dollars of currency into the economy, the public deposits all currency into the banking system, and banks have a desired reserve/deposit ratio of 0.2, then the banks will eventually make new loans totaling _____ and the money supply will increase by _____.

A) $12,000; $15,000 B) $12,000; $12,000 C) $3,000, $3,000 D) $3,000; $12,000

20) Sydney purchases a newly issued, two-year government bond with a principal amount of $10,000 and a coupon rate of 5 percent paid annually. One year before the bonds matures (and after receiving the coupon payment for the first year), Sydney sells the bond in the bond market. What price (rounded to the nearest dollar) will Sydney receive for his bond if newly issued one-year government bonds are paying a 4 percent coupon rate?

A) $10,400 B) $10,500 C) $10,920 D) $10,096

21) According to Okun's law, when cyclical unemployment decreases from 3.5 percent to −3 percent, the recessionary gap changes from _____.

A) −1.75 percent to 2 percent. B) 2 percent to −1.75 percent. C) 6 percent to −7 percent. D) −7 percent to 6 percent.

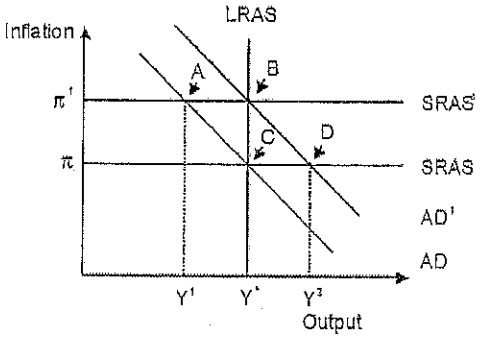
22) If planned aggregate expenditure (*PAE*) in an economy equals 2,000 + 0.90*Y* and potential output (*Y**) equals 20,000, then this economy has

A) a recessionary gap. B) no output gap. C) an expansionary gap. D) no autonomous expenditure.

23) If the income-expenditure multiplier equals 0.80, and a 1 percent increase in the real interest rate reduces autonomous spending by 5 units, then a 400 unit expansionary gap can be eliminated by _____ the real interest rate by _____ percent.

A) decreasing; 0.80 B) decreasing; 400 C) increasing; 1 D) increasing; 0.80

24) Refer to the accompanying figure.



An economy is currently in long-run equilibrium at point B, at an inflation rate of π^1, which is too high to sustain economic growth. If an anti-inflationary policy is enacted, the economy will be in short-run equilibrium at point _____ and eventually to a long-run equilibrium at point _____.

A) A; B B) A; C C) B; A D) B; C

25) Suppose the price of gold is $1,800 per ounce in the United States and 36,900 pesos per ounce in Mexico. If purchasing power parity holds and if the price of oil is 1,100 pesos per barrel in Mexico, the price of oil is _____ per barrel in the United States.

A) $33.50 B) $22,550 C) $53.70 D) $87.80

貳、填充題，每題 5 分，總分 25 分

26) Suppose there are three power-generating plants, each of which has access to 5 different production processes. The accompanying table summarizes the cost of each production process and the corresponding number of tons of smoke emitted each. Currently, three plants are at Process A and the total smoke emission is 12 tons/day.

Process (Smoke/Day)	*A (4 tons/day)*	*B (3 tons/day)*	*C (2 tons/day)*	*D (1 ton/day)*	*E (0 tons/day)*
Cost to Firm X ($/day)	$500	$514	$530	$555	$585
Cost to Firm Y ($/day)	$400	$420	$445	$480	$520
Cost to Firm Z ($/day)	$300	$325	$360	$400	$550

Suppose the government imposes a tax of _____ on each ton of smoke emitted. To minimize costs, the total smoke emission of the three plants was reduced to 6 tons/day.

27) A nation's real GDP was $300 billion in Year 1 and $330 billion in Year 2. Its population was 130 million in Year 1 and 135 million in Year 2. Its real GDP growth rate in Year 2 is _____ percent.

28) Below are descriptions of five different goods or services. For each, determine whether it is a public good, collective good, common good, or private good.

1. A lighthouse providing navigation aid to all ships passing nearby.
2. A subscription-based streaming service that limits access to paying customers only.
3. A city park where access is controlled via an annual membership fee.
4. Ocean fishery resources that are accessible to anyone with a fishing boat but can be depleted through overfishing.
5. An espresso machine sold exclusively in high-end appliance stores.

29) An economy is employing 7 units of capital, 10 units of raw materials, and 13 units of labor to produce its total output of 730 units. Each unit of capital costs $15; each unit of raw materials, $9; and each unit of labor, $6. If the per-unit price of raw materials rises from $9 to $13 and all else remains constant, the per-unit cost of production will rise by about _____ percent.

30) List five common cognitive biases relevant to behavioral economics.