

一、選擇題（16題，每小題4%，總共64%。）

1. The change to a new indifference curve following a rise in aggregate consumption caused by a price cut is:
 - A. a price effect.
 - B. an income effect.
 - C. a substitution effect.
 - D. a consumption effect.

2. According to the law of diminishing marginal utility:
 - A. as the production cost for a given product rises, the added benefit eventually diminishes.
 - B. as the consumption of a given product rises, the added benefit eventually diminishes.
 - C. the demand curve for some products is upward-sloping.
 - D. as the price of a given product rises, the added benefit eventually diminishes.

3. Given limited budgets, consumers obtain the most satisfaction if they purchase goods and services that:
 - A. provide the highest level of marginal utility.
 - B. provide the highest level of marginal utility per dollar spent.
 - C. provide the highest level of total utility.
 - D. cost the least.

4. When the point price elasticity of demand equals -2 and the marginal cost per unit is \$5, the optimal price is:
 - A. \$5.
 - B. \$10.
 - C. impossible to determine without further information.
 - D. \$2.

5. The demand for a product tends to be inelastic if:
 - A. it is expensive.
 - B. consumers are quick to respond to price changes.
 - C. a small proportion of consumer's income is spent on the good.
 - D. it has many substitutes.

注意：背面有試題

6. The demand curve for automobiles will shift to the right if:
- A. interest rates increase.
 - B. the price of steel decreases.
 - C. advertising expenditures increase.
 - D. the price of automobiles decreases.
7. If the production of two goods is complementary a decrease in the price of one will:
- A. decrease supply of the other.
 - B. increase supply of the other.
 - C. increase the quantity supplied of the other.
 - D. decrease the price of the other.
8. If demand increases while supply decreases for a particular good:
- A. its equilibrium price will increase while the quantity of the good produced and sold would increase, decrease, or remain constant.
 - B. the quantity of the good produced and sold will decrease while its equilibrium price would increase, decrease, or remain constant.
 - C. The quantity of the good produced and sold will increase while its equilibrium price could increase, decrease or remain constant.
 - D. its equilibrium price will decrease while the quantity of the good produced and sold could increase, decrease, or remain constant.
9. If a decrease in price causes total revenue to increase, the absolute value of the price elasticity of demand is:
- A. greater than one.
 - B. greater than zero but less than one.
 - C. equal to one.
 - D. equal to zero.
10. Two products are complements if the:
- A. cross-price elasticity of demand equals zero.
 - B. cross-price elasticity of demand is greater than zero.
 - C. price elasticity of demand for each good is greater than zero.
 - D. cross-price elasticity of demand is less than zero.

11. Marginal profit equals average profit when:
- A. the profit maximizing output is produced.
 - B. marginal profit is maximized.
 - C. marginal profit equals marginal cost.
 - D. average profit is maximized.
12. If average profit increases with output:
- A. marginal profit must be increasing.
 - B. marginal profit must be decreasing.
 - C. marginal profit must be greater than average profit.
 - D. marginal profit must be less than average profit.
13. An increase in output reduces total profits if:
- A. marginal profit is negative.
 - B. marginal profit is less than average profit.
 - C. marginal profit is greater than average profit.
 - D. average profit is decreasing.
14. Marginal profit equals:
- A. total revenue minus total cost.
 - B. the change in total profit following a managerial decision.
 - C. average revenue minus average cost.
 - D. the change in total profit following a one unit-change in output.
15. If total revenue increases at a constant rate as output increases, marginal revenue:
- A. equals average revenue.
 - B. is greater than average revenue.
 - C. is less than average revenue.
 - D. is greater than average revenue at low levels of output and less than average revenue at high levels of output.
16. When marginal profit equals zero:
- A. profit is maximized.
 - B. the firm can increase profits by increasing output.
 - C. the firm can increase profits by decreasing output.
 - D. marginal revenue equals average revenue.

二、計算題（36%，每小題9%）

Sunshine Pest Control (SPC), Inc., provides exterminator services to residences in the Taipei area. The primary resources SPC employs are skilled exterminators and large dome/air pumps used to cover the homes, pump in insecticide, and minimize leakage to the environment. Currently, SPC employs 10 exterminators at a cost of \$15 per hour, employs 2,000 hours of pump time each week at a cost of \$3 per hour. Each exterminator works a 40-hour week. This level of employment allows SPC to complete 100 treatments per week for which the firm receives \$100 each.

- A. Assuming that both returns to factors and returns to scale are constant, what are the marginal products for (1) exterminators and (2) gallons of chemicals?
- B. Is SPC employing labor and domes in an optimal ratio, assuming that substitution of the resources is possible? Explain.
- C. Determine the marginal revenue products for exterminator and for the domes/pumps employed by SPC (Assume constant returns to factors in Part A.)
- D. Is SPC employing an optimal (profit-maximizing) quantity of labor and computer time? Explain.