

YSU Economics 2025

Name (in English): _____

Assignment (20%)

Due: Fri 13 June (11:59 PM)

Student ID: _____

INSTRUCTIONS:

- This assignment contains 10 pages, consisting of 2 written questions (20 points each) and 30 multiple-choice questions (2 points each), totalling 100 points.
- For written questions, show your work clearly and write your answers in English.
- For multiple-choice questions, read each question and answer choice carefully, and choose the ONE best answer by placing a cross **X** inside the box corresponding to the correct answer letter. Please use the answer sheet on the first page.
- **You are only required to submit pages 1 to 4 of this assignment.**
- Please ensure that your name (in English) and student ID are clearly written or typed in the top-right corner of the first page.
- For all inquiries and assignment submissions, send them to WeChat ID: **cubdwi**. Once submitted, please wait for a confirmation message and take a screenshot as proof of submission.

ANSWER SHEET

	A	B	C	D
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PART I WRITTEN QUESTIONS**Question 1 (20 points)**

An insurance company is deciding on a premium rate it should charge the owner of BYD dolphin for the total loss of the car worth RMB99,800 with the probability of the total loss equals to 0.02.

- a) (10 points) Calculate the maximum premium that an individual would be prepared to pay to insure himself against the total loss of his car if his initial level of wealth was RMB120,000. The individual's utility function is given by $U(w) = \ln(w)$.
- b) (10 points) Calculate the minimum premium that the insurance company with an initial wealth of \$50 million would require in order to offer the insurance. The company's utility function is given by $U(w) = -w^2$.

Question 2 (20 points)

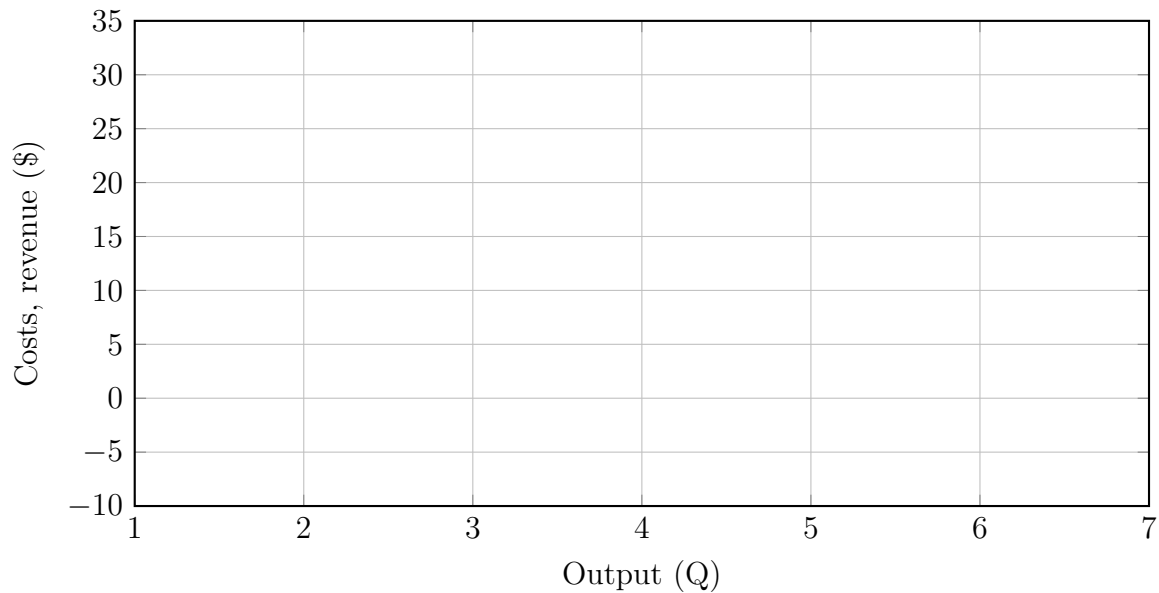
An orange juice company is trying to determine the maximum profit it can achieve and the profit-maximising outputs (Q), given the average fixed cost (AFC), average variable cost (AVC), and average revenue (AR). Tip. You might want to use Excel to confirm your answer.

- a) (5 points) Complete the table by calculating the average cost (AC), total cost (TC), total revenue (TR), marginal cost (MC), marginal revenue (MR), and total profit (TII). Note that all values are in millions.

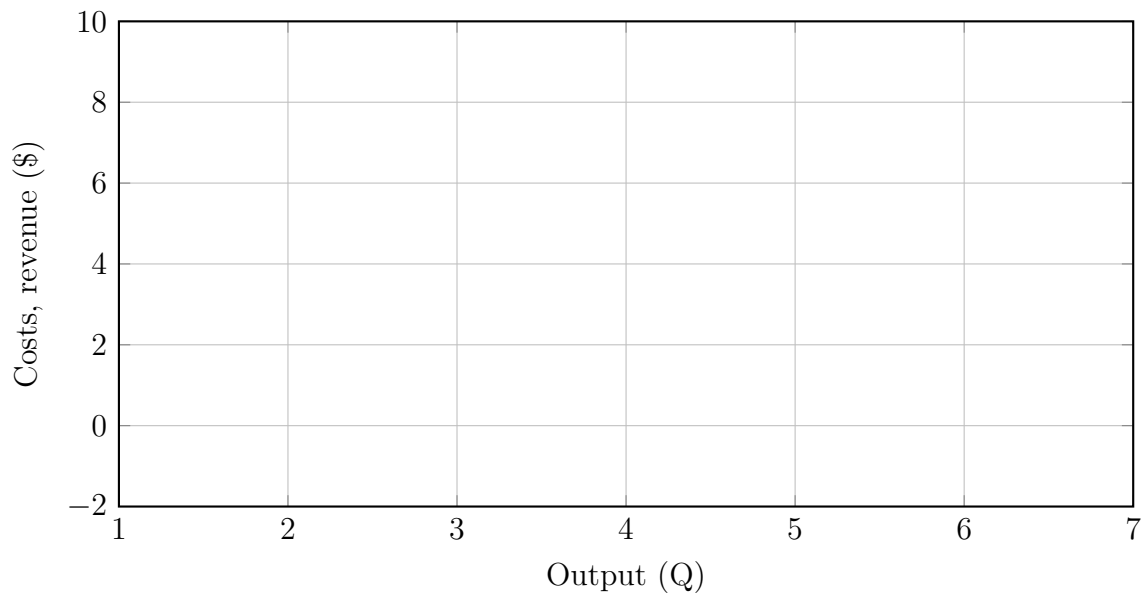
Q	AR	AFC	AVC	AC	TC	TR	MC	MR	TII
1	10	2	5.8						
2	9	2	4.0						
3	8	2	2.8						
4	7	2	2.2						
5	6	2	1.9						
6	5	2	2.2						
7	4	2	2.8						

- b) (1 point) Identify the profit-maximising output level. What is the maximum profit?

- c) (4 points) Plot TR, TC, and TII curves on a graph. Mark the point that represents the maximum profit. Confirm your solution with part b).



- d) (4 points) Plot AR, MR, AC, and MC curves on a graph.



- e) (2 points) Mark the profit-maximising output and label the corresponding AR and AC on the graph in part d).
- f) (4 points) Shade the area representing the firm's maximum profit on the graph in part d). Calculate the area of the shaded rectangle.

PART II MULTIPLE CHOICE QUESTIONS

1. (2 points) A student spends three hours at the movies before an exam. Which basic principle of individual choice does this situation illustrate?
 - A. Resources are scarce.
 - B. All decisions involve opportunity costs.
 - C. It is rational to exploit the opportunity.
 - D. Diminishing marginal utility.
2. (2 points) Which of the following is **least likely** to be an obstacle to the efficient allocation of resources?
 - A. Price controls.
 - B. Common resources.
 - C. Imperfect information.
 - D. Technological advancement.
3. (2 points) The availability of microwave ovens substantially reduces the labour required to make pizza. In the market for pizza, the invention of microwave ovens:
 - A. reduces the equilibrium quantity and the equilibrium price.
 - B. increases both the equilibrium quantity and the equilibrium price.
 - C. increases the equilibrium quantity and reduces the equilibrium price.
 - D. reduces the equilibrium quantity and increases the equilibrium price.
4. (2 points) The price of electric vehicles (EVs) rises, and its quantity sold also rises. We can conclude that the demand curve for EVs
 - A. is shifted to the right.
 - B. is shifted to the left.
 - C. is unchanged.
 - D. None of the above.
5. (2 points) A rational consumer will buy more of a good if
 - A. marginal utility is less than price.
 - B. marginal utility is greater than price.
 - C. total utility is less than price.
 - D. total utility is greater than price.
6. (2 points) A firm realises that it is producing more than the profit-maximising level of output and makes a short-run decision to reduce its output. Which of the firm's cost measures is **least likely** to decrease as a result?
 - A. Total cost.

- B. Average variable cost.
 - C. Average fixed cost.
 - D. Marginal cost.
7. (2 points) Which of the following would **not** cause a shift in the demand curve for cereal?
- A. A change in the price of cereal.
 - B. A change in the price of milk.
 - C. A change in the price of oatmeal.
 - D. A change in consumer income.
8. (2 points) The concept of elasticity assumes that:
- A. consumers demand for normal goods will decrease as income increases.
 - B. rational consumers always purchase the same amount of a good regardless of its price.
 - C. changes in the price of a good have no effect on the quantity demanded.
 - D. changes in the price of a good will affect the quantity demanded.
9. (2 points) If the quantity demanded increases by 15% when the price drops by 1%, then the demand for this good is
- A. unit elastic.
 - B. perfectly elastic.
 - C. elastic, but not perfectly.
 - D. inelastic
10. (2 points) Assuming that the demand for solar panels is elastic, what effect would you expect an increase in solar PV supply to have on its total revenue?
- A. No change in total revenue.
 - B. An increase in total revenue.
 - C. A decrease in total revenue.
 - D. There is not enough information to say about the change in total revenue.
11. (2 points) An instant noodle company finds that its cross-elasticity of demand with respect to instant porridge is reported to be +0.3. This implies that the two goods are:
- A. in joint supply.
 - B. complements.
 - C. substitutes.
 - D. inferior.

12. (2 points) A rich person feels less satisfied with earning extra \$100 demonstrates the example of:
- A. the optimum level of consumption.
 - B. the optimum level of income.
 - C. the law of diminishing marginal returns.
 - D. the principle of diminishing marginal utility of income.
13. (2 points) The policyholder tends to drive recklessly after taking the car insurance. What is the term describing this behaviour, and what can the insurance company do to prevent it?
- A. Adverse selection. The insurance company should obtain as much information as possible about the policyholder.
 - B. Adverse selection. The insurance company should charge a premium as high as possible to cover the risk.
 - C. Moral hazard. The insurance company should introduce an excess when a claim is made and offer no-claim rewards for a year with no incidents.
 - D. Moral hazard. The insurance company should only offer insurance to individuals who have never been involved in an accident.
14. (2 points) Which of the following statements regarding marginal costs (MC) and average costs (AC) is most accurate?
- A. $MC = AC$ when the average cost is at its minimum.
 - B. $MC = AC$ when the average cost is zero.
 - C. $MC > AC$ when the average cost is decreasing.
 - D. $MC < AC$ when the average cost is increasing.
15. (2 points) Price takers are
- A. A firm that has the ability to influence the price charged for its good or service.
 - B. A person who buys or uses goods and services.
 - C. An organisation whose purpose is to provide a good or service.
 - D. A firm (or individual) that accepts the market equilibrium price, as it lacks market share and negotiation power.
16. (2 points) Which type of industry benefits most from economies of scale?
- A. Restaurants
 - B. Farmers
 - C. Startup company
 - D. Regulated utilities

17. (2 points) If the quantity supplied can be described by the equation: $QS = -18 + 5P$, the slope of the supply curve is
- A. 5
 - B. $1/5$
 - C. 18
 - D. -18
18. (2 points) A store supply sugar to a bakery at \$4 per kilogram but will offer a 20% discount on the 1000th kilogram. What would be the store's marginal revenue for the 1000th kilogram of sugar.
- A. -200
 - B. -320
 - C. -796
 - D. -800
19. (2 points) Which of the following is a factor affecting the degree of market power and competition?
- A. Number of firms
 - B. Number of products
 - C. Number of customers
 - D. Number of workers
20. (2 points) Profit (or loss) in the short-run equilibrium of the firm is determined by
- A. the difference between average cost and average revenue.
 - B. the difference between marginal cost and marginal revenue.
 - C. the difference between total cost and total revenue.
 - D. the difference between total fixed cost and total revenue.
21. (2 points) Starting from **the least to the most competitive** markets, there are four basic types of market structure in economics, namely:
- A. Monopoly, monopolistic competition, oligopoly and perfect competition.
 - B. Monopoly, oligopoly, monopolistic competition and perfect competition
 - C. Monopolistic competition, monopoly, oligopoly and perfect competition
 - D. None of the above.
22. (2 points) How do monopolies and oligopolies operate at a lower average cost than potential new entrants?
- A. Economies of scope.
 - B. Diseconomies of scope.

- C. Economies of scale.
 - D. Diseconomies of scale.
23. (2 points) Economic theory states that a profit-maximising firm would set prices following the $MC = MR$. In practice, it is difficult to do so because
- A. Not enough information about the number of substitute goods.
 - B. Not enough information about profit mark-up.
 - C. Not enough information about customers' utility function.
 - D. Not enough information about the demand, costs, and revenues.
24. (2 points) Upon entering a zoo, you see a sign saying "10% discount for all students and seniors". This is an example of
- A. First-degree price discrimination.
 - B. Second-degree price discrimination.
 - C. Third-degree price discrimination.
 - D. Fourth-degree price discrimination.
25. (2 points) A gym offers a membership fee at \$250 per year with an additional cost of \$15 per hour if customers hire a personal trainer. Which pricing strategy is used in this case?
- A. Cost-based pricing
 - B. Two-part tariff pricing
 - C. Limit pricing
 - D. Promotional pricing
26. (2 points) What is the process of restoring the national income equilibrium when aggregate demand exceeds income? Hint: J = injections, W = withdrawals, and Y = factor payments.
- A. $J > W \rightarrow Y \uparrow \rightarrow W \uparrow$ until $J = W$
 - B. $J < W \rightarrow Y \uparrow \rightarrow W \uparrow$ until $J = W$
 - C. $J > W \rightarrow Y \downarrow \rightarrow W \downarrow$ until $J = W$
 - D. $J > W \rightarrow Y \uparrow \rightarrow W \downarrow$ until $J = W$
27. (2 points) In a particular economy, the size of multiplier is +2.0, while the GDP increases from \$300m to \$325m. We can conclude that an increase in GDP results from:
- A. an increase in injections of \$12.5m
 - B. an increase in national income of \$12.5m
 - C. an increase in aggregate demand of \$12.5m
 - D. an increase in aggregate supply of \$12.5m

28. (2 points) From the information given in the following table, what is the value of this economy's GDP, GNY, and NNY?

Expenditure category	\$ million
Household expenditure	\$170
Government final consumption	\$50
Gross investment information	\$40
Exports of goods and services	\$60
Imports of goods and services	\$55
Net income from abroad	\$30
Total capital consumption (depreciation)	\$35

- A. \$295m, \$265m, and \$230m
- B. \$265m, \$295m, and \$260m
- C. \$260m, \$265m, and \$295m
- D. \$230m, \$260m, and \$265m
29. (2 points) What are the effects of an increase in injections on the four macroeconomic objectives?
- A. Lower economic growth, lower unemployment rate, lower inflation, and lower imports.
- B. Lower economic growth, lower unemployment rate, higher inflation, and higher imports.
- C. Higher economic growth, lower unemployment rate, lower inflation, and lower imports.
- D. Higher economic growth, lower unemployment rate, higher inflation, and higher imports.
30. (2 points) Government policies that can be used as tools for the redistribution of wealth and income include
- A. both fiscal and monetary policy.
- B. monetary policy only.
- C. fiscal policy only.
- D. None of the above.