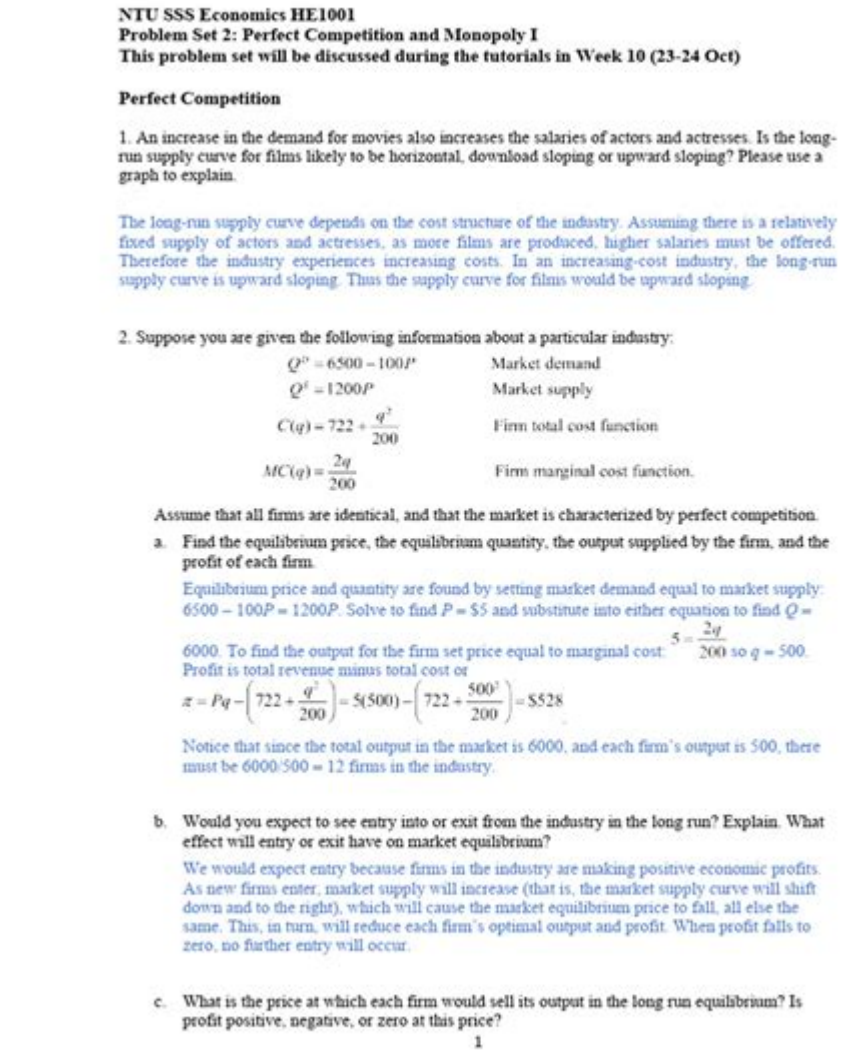
Economics Laboratory 2 Answer Key



NTU SSS Economics HE1001
Problem Set 2: Perfect Competition and Monopoly I
This problem set will be discussed during the tutorials in Week 10 (23-24 Oct)

Perfect Competition

1. An increase in the demand for movies also increases the salaries of actors and actresses. Is the long-run supply curve for films likely to be horizontal, download sloping or upward sloping? Please use a graph to explain.

The long-run supply curve depends on the cost structure of the industry. Assuming there is a relatively fixed supply of actors and actresses, as more films are produced, higher salaries must be offered. Therefore the industry experiences increasing costs. In an increasing-cost industry, the long-run supply curve is upward sloping. Thus the supply curve for films would be upward sloping.

2. Suppose you are given the following information about a particular industry:

$Q^D = 6500 - 100P$ Market demand
$Q^S = 1200P$ Market supply
$C(q) = 722 + \frac{q^2}{200}$ Firm total cost function
$MC(q) = \frac{2q}{200}$ Firm marginal cost function.

Assume that all firms are identical, and that the market is characterized by perfect competition.

a. Find the equilibrium price, the equilibrium quantity, the output supplied by the firm, and the profit of each firm.

Equilibrium price and quantity are found by setting market demand equal to market supply: $6500 - 100P = 1200P$. Solve to find $P = \$5$ and substitute into either equation to find $Q = 6000$. To find the output for the firm set price equal to marginal cost: $5 = \frac{2q}{200}$ so $q = 500$. Profit is total revenue minus total cost or

$$\pi = Pq - \left(722 + \frac{q^2}{200}\right) = 5(500) - \left(722 + \frac{500^2}{200}\right) = \$528$$

Notice that since the total output in the market is 6000, and each firm's output is 500, there must be 6000/500 = 12 firms in the industry.

b. Would you expect to see entry into or exit from the industry in the long run? Explain. What effect will entry or exit have on market equilibrium?

We would expect entry because firms in the industry are making positive economic profits. As new firms enter, market supply will increase (that is, the market supply curve will shift down and to the right), which will cause the market equilibrium price to fall, all else the same. This, in turn, will reduce each firm's optimal output and profit. When profit falls to zero, no further entry will occur.

c. What is the price at which each firm would sell its output in the long run equilibrium? Is profit positive, negative, or zero at this price?

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Economics laboratory 2 answer key is an essential resource for students and educators alike in the field of economics. It serves as a guide for understanding complex economic concepts and applying theoretical knowledge in a practical setting. This article will explore the structure and purpose of an economics laboratory, the significance of an answer key, and how it aids in the learning process. We will also delve into common experiments conducted in economics laboratories and present an example of an answer key for a typical laboratory exercise.

Understanding the Economics Laboratory

An economics laboratory is a dynamic educational environment where students can engage with economic theories through practical experimentation. Unlike traditional classrooms, economics laboratories allow students to simulate real-world economic scenarios, fostering a deeper understanding of concepts such as supply and demand, market structures, and consumer behavior.

The Purpose of Economics Laboratories

The primary goals of economics laboratories are:

1. Application of Theoretical Knowledge: Students can apply theoretical concepts learned in lectures to practical situations, enhancing their understanding.
2. Development of Analytical Skills: Laboratory exercises often require students to analyze data, interpret results, and draw conclusions based on their findings.
3. Encouragement of Collaboration: Many laboratory activities are designed to be completed in groups, promoting teamwork and collaborative problem-solving.

Components of an Economics Laboratory

An economics laboratory typically comprises several key components:

- Experimental Design: This involves creating scenarios or games that mimic real-life economic situations.
- Data Collection: Students gather data during experiments, which can include prices, quantities, and consumer preferences.
- Analysis: After data collection, students analyze the results using statistical tools and economic theories.

- Discussion and Reporting: Finally, students discuss their findings and submit reports that summarize their experiments.

Importance of the Economics Laboratory 2 Answer Key

The economics laboratory 2 answer key plays a crucial role in the educational process. It serves as a reference point for students to check their work and ensure they understand the material covered in the laboratory. An answer key can also highlight common misconceptions, guiding students toward a clearer understanding.

Benefits of Using an Answer Key

1. Self-Assessment: Students can assess their understanding and performance by comparing their answers to the answer key.
2. Immediate Feedback: An answer key provides immediate feedback, allowing students to identify and correct mistakes promptly.
3. Enhanced Learning: By reviewing the correct answers, students can reinforce their understanding of the concepts and improve their problem-solving skills.
4. Preparation for Exams: The answer key serves as a study tool, helping students prepare for upcoming tests or assessments by reinforcing critical concepts.

Common Experiments in Economics Laboratories

Economics laboratories often conduct various experiments to illustrate key concepts. Some common experiments include:

- Market Simulation: Students participate in a simulated market where they act as buyers and sellers,

allowing them to experience market dynamics firsthand.

- Price Elasticity of Demand: This experiment examines how changes in price affect the quantity demanded by consumers.
- Game Theory Experiments: Students engage in strategic games that demonstrate concepts such as Nash equilibrium and cooperative behavior.
- Public Goods Experiment: This study explores the challenges associated with providing public goods and the free-rider problem.

Example of an Economics Laboratory Exercise and Answer Key

Let's consider an example of a laboratory exercise focused on price elasticity of demand.

Laboratory Exercise: Price Elasticity of Demand

Objective: To determine the price elasticity of demand for a specific product using data collected from a simulated market.

Instructions:

1. Set the initial price of the product at $10.
2. Record the quantity demanded at this price.
3. Increase the price to $12 and record the new quantity demanded.
4. Calculate the price elasticity of demand using the formula:

$$
E_d = \frac{\%\ \text{Change in Quantity Demanded}}{\%\ \text{Change in Price}}
$$

Data Collected:

- Initial Price: $10
- Quantity Demanded at $10: 100 units

- New Price: $12

- Quantity Demanded at $12: 80 units

Calculations:

1. Percentage Change in Quantity Demanded:

- Change in Quantity = 100 - 80 = 20

- Percentage Change = $\frac{20}{100} \times 100 = 20\%$

2. Percentage Change in Price:

- Change in Price = 12 - 10 = 2

- Percentage Change = $\frac{2}{10} \times 100 = 20\%$

3. Price Elasticity of Demand Calculation:

$$
E_d = \frac{-20\%}{20\%} = -1
$$

Answer Key:

1. Initial Price: $10

2. Quantity Demanded at $10: 100 units

3. New Price: $12

4. Quantity Demanded at $12: 80 units

5. Price Elasticity of Demand: -1 (indicating unitary elasticity)

Conclusion

The economics laboratory 2 answer key serves as an invaluable tool for students navigating the complexities of economic theories and practical applications. By participating in laboratory exercises and utilizing answer keys, students not only reinforce their understanding but also develop critical analytical skills essential for their future careers in economics. As educational methodologies continue

to evolve, the integration of hands-on learning experiences in economics will remain a cornerstone of effective economic education. Whether through simulated markets, game theory experiments, or analysis of real data, economics laboratories provide a rich environment for exploration and discovery, making the study of economics both engaging and relevant.

Frequently Asked Questions

What is the purpose of an economics laboratory in academic settings?

An economics laboratory is utilized for practical experiments and simulations to understand economic theories, test hypotheses, and analyze data in real-time scenarios.

How can students access the answer key for Economics Laboratory 2?

Students can typically access the answer key through their institution's learning management system or by requesting it from their course instructor.

What topics are generally covered in Economics Laboratory 2?

Economics Laboratory 2 usually covers advanced topics such as game theory, market simulations, econometrics, and behavioral economics experiments.

Are answer keys for economics laboratories standardized across universities?

No, answer keys may vary significantly between institutions as they are tailored to the specific curriculum and experiments designed by individual instructors.

What skills can students develop through participating in an

economics laboratory?

Students can develop analytical skills, critical thinking, data analysis, teamwork, and practical application of economic theories through hands-on experimentation.

Why is it important to refer to the answer key while studying for economics labs?

Referring to the answer key helps students verify their understanding, identify areas of confusion, and reinforce learning by comparing their answers with correct solutions.

Can students find solutions to laboratory exercises online?

While some solutions may be available online, it's important for students to focus on academic integrity and rely on their own understanding and institutional resources for assistance.

Economics Laboratory 2 Answer Key

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