**Please use the space provided, or additional space on the back, to respond to the following. You may not attach additional paper to this exam.**

1. The mayor of Trimpetown has received many complaints from her constituents about how expensive rental housing is in her city. In fact, a new political party called “The Rent is Too Durn High”, has been lobbying for rent control legislation in Trimpetown. As the mayor’s economic advisor, discuss the pros and cons of rent control in her city. Draw a well-labeled graph of the rental housing market, with and without rent control, to assist in your discussion. Be sure to address issues of both equity and efficiency. (10 points)

2. Explain why a profit-maximizing firm may continue to operate with short-run losses, rather than simply shutting down. (8 points)

3. The perfectly competitive market for Whoopdedoos is currently in short-run equilibrium where the market price of a Whoopdedoo is greater than average total cost for the typical firm.

a. Draw side-by-side graphs of the market and the profit maximizing output for the typical firm. Label all prices, quantities and profit (if any). (9 points)

b. How will this market adjust in the long run? There is no need to use a graph, just tell the story step by step. Be sure to include changes in both the market for Whoopdedoos and the profit-maximizing decision for a typical firm. (6 points)

4. Archer’s Starchers is the only firm in Niceville that offers dry-cleaning and laundry services. The demand curve and marginal revenue curve for this service is given by:

P = 80 – 2Qd.

MR = 80 – 4Qd.

a. Explain why the MR curve for this monopolist lies below the demand curve. (6 points)

b. Archer’s Starchers has a constant marginal and average total cost of $8 (MC=ATC=$8) for each item that they clean. Calculate the monopoly output and price that maximizes profit. (6 points)

c. Calculate the economic profit or loss that Archer’s Starchers earns as a monopolist. (4 points)

5. Smith and Rosen are two oligopolistic gun manufacturers engaged in bitter competition with one another. Each firm is deciding whether to build a new factory in the city of Davenport. The table below shows profit payoffs for the firms (Smith, Rosen) under various scenarios:

|  |  |  |
| --- | --- | --- |
|  |  | **Rosen** |
|  |  | **Build** | **Don’t Build** |
| **Smith** | **Build** | 5, 5 | 3, 1 |
| **Don’t build** | 4, 1 | 2, 2 |

a. Does either firm have a dominant strategy? Explain. (6 points)

b. What is the Nash equilibrium of this game? Explain how you came to this conclusion. (5 points)

c. Is this a prisoner’s dilemma? Explain how you came to this conclusion. (6 points)

6. Johnson, Inc. is a term paper writing service. The firm employs a variable amount of labor to a fixed amount of capital to produce term papers for desperate customers. The price of the output is determined in a competitive market and is currently $50. The table below shows the short-run production function for Johnson, Inc.

|  |  |
| --- | --- |
| **Employees (L)** | **Total Term Papers Produced (Q)** |
| 0 | 0 |
| 1 | 7 |
| 2 | 13 |
| 3 | 18 |
| 4 | 22 |
| 5 | 25 |
| 6 | 27 |
| 7 | 28 |

a. If the wage is also determined in a competitive labor market and is currently $100, how many employees should Johnson, Inc. employ? Show your work and explain how you came to this answer. (10 points)

b. If Johnson, Inc. was a monopsonist in this labor market, would they employ more or fewer workers than your response in part (a)? Would the wage paid to each worker be higher or lower than the wage in part (a)? Explain. (8 points)

7. How will the following events affect wages and employment in these competitive labor markets? Briefly explain your responses.

a. In the labor market for commercial truck drivers, the state is requiring that each driver complete additional safety testing before he or she can receive a new commercial truck driving license. (8 points)

b. In the labor market for nurses, an aging population has increased the demand for medical care. (8 points)