2. (a) Draw a correctly labeled graph showing a typical monopoly that is maximizing profit and indicate each of the following.
   - (i) Price
   - (ii) Quantity of output
   - (iii) Profit

   (b) Describe and explain the relationship between the monopolist's demand curve and marginal revenue curve.

   (c) Label each of the following on your graph in part (a).
   - (i) Consumer surplus
   - (ii) Deadweight loss

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3. Assume that Company XYZ is a profit-maximizing firm that hires its labor in a perfectly competitive labor market and sells its product in a perfectly competitive output market.

   (a) Define the marginal revenue product of labor (MRP_L).

   (b) Using correctly labeled side-by-side graphs, show each of the following.
   - (i) The equilibrium wage in the labor market
   - (ii) The labor supply curve the firm faces
   - (iii) The number of workers the firm will hire

   (c) Company XYZ develops a new technology that increases its labor productivity. Currently this technology is not available to any other firm. For Company XYZ, explain how the increased productivity will affect each of the following.
   - (i) Wage rates
   - (ii) Number of workers hired

END OF EXAMINATION

Question 2

Correct Answers:

Part a: For the monopolist, a correctly labeled graph should show a downward-sloping demand curve with a marginal revenue curve that lies below the demand curve. The monopolist's profit-maximizing output is found at the intersection of marginal revenue and marginal cost. The price is found on the demand curve, above the quantity produced. The firm's profits are represented by the rectangle that has a height (or vertical distance) of (P-ATC) multiplied by the profit-maximizing output or Q.

Part b: Marginal revenue is less than price since to sell additional units of output, the monopolist must lower price on all units of output sold.

Part c: Consumer surplus is the area bounded vertically by the difference between the demand curve (willingness to pay) and the monopolist's price over the number of units sold by the monopolist. The deadweight loss from monopoly is the combination of consumer and producer surplus that is lost when comparing the monopoly output to the output that would be produced under competitive conditions (where P=MC).

Question 2 (cont'd)

Grading Rubric:

Point allocations: **(7 points: 4 + 1 + 2)**

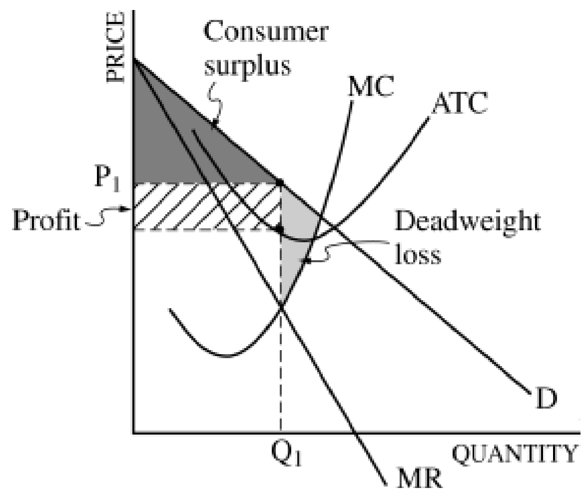
(a) 4 points

1 point for correctly labeled graph with downward-sloping demand curve AND marginal revenue curve below demand.

1 point for indicating Q at MR=MC.

1 point for finding the appropriate P on the demand curve directly above MR=MC output.

1 point for area of profit (must use P, ATC, and Q).



(b) 1 point - the monopolist must lower its price on all units to sell addtional quantities so MR<P.

(c) 2 points

1 point for indicating correct area for consumer surplus.

1 point for indicating correct area for deadweight loss.