(c) Now assume that the monopolist produces 10 units. Using the numbers given in the graph, calculate each of the following. <u>Show your work</u>.

    (i) The monopolist's economic profit

    (ii) The consumer surplus

    (iii) The deadweight loss

(d) At what quantity is demand unit elastic?

(e) Suppose the monopolist perfectly price discriminates and chooses the quantity that maximizes profit. Determine the dollar value of each of the following.

    (i) The monopolist's profit

    (ii) The consumer surplus

_____

2. Ray's Stable hires workers in a perfectly competitive factor market for unskilled labor.

(a) Using correctly labeled side-by-side graphs for the labor market and Ray's Stable, show each of the following.

    (i) The equilibrium wage and quantity for unskilled labor, labeled W_E and Q_E, respectively

    (ii) The wage paid by Ray's Stable and the quantity of unskilled labor hired, labeled W_R and Q_R, respectively

(b) Is the marginal factor cost of unskilled labor for Ray's Stable greater than, less than, or equal to W_E? Explain.

(c) Now assume that the government imposes an effective minimum wage for unskilled labor.

    (i) Show the minimum wage on your graphs in part (a), labeled W_{MIN}.

    (ii) On the labor market graph in part (a), show the quantity of unskilled labor supplied in the labor market as a result of the minimum wage, labeled Q_S.

    (iii) As a result of the new minimum wage, will the marginal revenue product of the last worker hired by Ray's Stable increase, decrease, or stay the same?

3. Assume that gasoline is sold in a competitive market in which demand is relatively inelastic and supply is relatively elastic.

   (a) Draw a correctly labeled graph of the gasoline market. On your graph show the equilibrium price and quantity of gasoline, labeled P_E and Q_E.

   (b) Suppose the government imposes a $2 per unit tax on the producers of gasoline. On your graph from part (a), show each of the following after the tax is imposed.

      (i) The price paid by buyers, labeled P_B

      (ii) The after-tax price received by sellers, labeled P_S

      (iii) The quantity, labeled Q_T

   (c) Using the labeling on your graph, explain how to calculate the total tax revenue collected by the government.

   (d) Will the tax burden fall entirely on buyers, entirely on sellers, more on buyers and less on sellers, more on sellers and less on buyers, or equally on buyers and sellers? Explain.
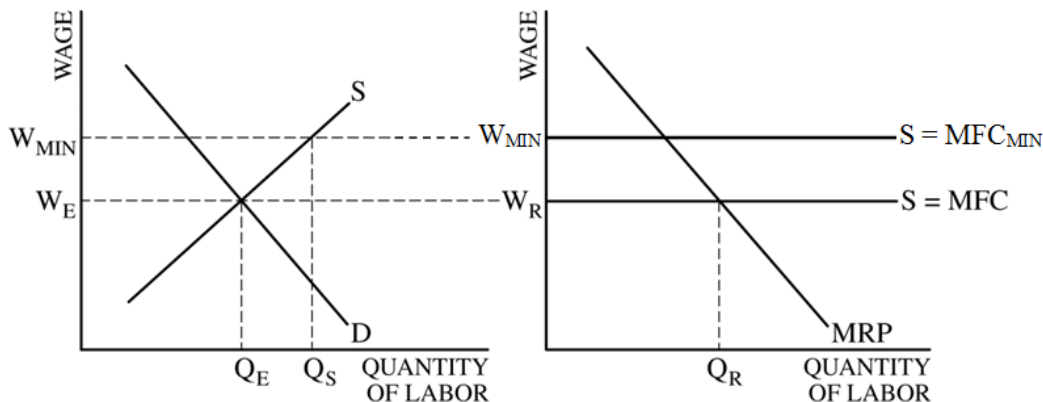
STOP

END OF EXAM

Question 2

6 points (2 + 1 + 3)

(a) 2 points:
- One point is earned for drawing a correctly labeled graph of the labor market with an upward-sloping labor supply curve and a downward-sloping labor demand curve and for correctly identifying the equilibrium wage, W_E, and quantity, Q_E.
- One point is earned for drawing a correctly labeled graph showing Ray's Stable demand curve for labor and a horizontal labor supply curve and showing the equilibrium wage, W_R, and quantity, Q_R.

(b) 1 point:
- One point is earned for stating that Ray's Stable's marginal factor cost is equal to W_E, and for explaining that the firm is a wage taker in the labor market and/or the market sets the wage.

(c) 3 points:
- One point is earned for showing the minimum wage, W_{MIN}, on the graph in part (a) above the equilibrium wage W_E.
- One point is earned for showing the quantity supplied of unskilled labor, Q_S, derived from the supply curve at W_{MIN}.
- One point is earned for stating that the marginal revenue product of the last worker hired will increase.