3. Assume that a profit-maximizing firm in a monopolistically competitive industry is in long-run equilibrium.
   (a) Draw a correctly labeled graph that shows the profit-maximizing firm's price and output.
   (b) Assume that the city in which this industry operates eliminates the business license fee (a fixed cost) for all firms in this industry. How does the elimination of the license fee affect each of the following for the individual firm in the short run? Explain your answers.
      (i) Output
      (ii) Economic profits

END OF EXAMINATION

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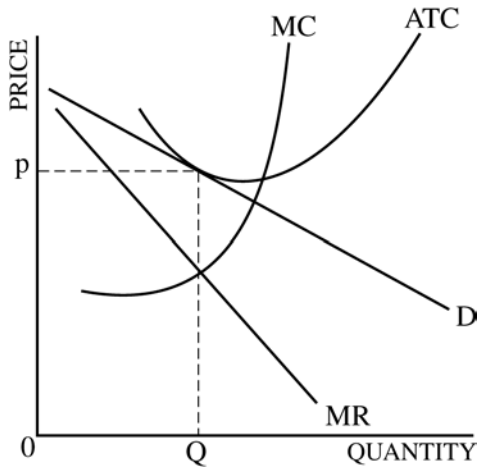
Question 3

Correct Answer:

(a) The correct graph for a monopolistically competitive firm will show a downward-sloping D curve with a downward-sloping MR curve below it. The firm's price and output would be found at the equality of MR and MC. In the long run, the ATC curve is tangent to the demand curve and equal to price directly above the output level at which MR=MC.

(b) When the fixed cost decreases, MC is not affected so that the output and price remain constant. Economic profit increases since the ATC falls.

Scoring Guidelines: 8 points (4+4)



(a) 4 points:

1 - Graph with a downward-sloping demand curve with correctly labeled axes

1 - Downward-sloping marginal revenue curve below the demand curve

1 - Q from MR = MC and P from Demand directly above Q

1 - Long-run equilibrium, AC (or ATC) tangent to Demand at Q

(b) 4 points:

1 - Individual firm's output level does not change

1 – License fee is a fixed cost, thus it does not affect the firm's marginal cost

1 - Economic profits increase

1 - Explanation

**Contingent on b(i)

If Q does not change in b(i), TC or ATC decrease is sufficient.

If Q changes in b(i), then "correct" explanation of how TR/TC or AR/ATC is affected is necessary.