

EC107

Economics 1

Term 1

In-Class Questions

Week 8 Support and Feedback Class

Unit 7

The Firm and its Customers

**In-Q7.1:** Draw a diagram in which you represent the firm's iso-profit curve: the vertical axis should show price and cost per unit and the horizontal axis should measure output. Assume initially that cost per unit is constant ( $AC = c$ ).

- (i) Explain what an iso-profit curve represents.
- (ii) If the firm just breaks even (price charged,  $p = c$ ), why is the iso-profit curve horizontal?
- (iii) If  $p > c$ , why is the iso-profit curve downward-sloping?
- (iv) Derive the mathematical expression for the iso-profit curve.
- (v) Why do higher iso-profit curves represent higher levels of profit?

Assume now that the marginal cost of output is rising with output.

- (vi) What is the shape of an iso-profit curve if MC is rising? Explain your answer.
- (vii) What is the relationship between the MC curve and the iso-profit curve? Explain your answer.

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**In-Q7.2:** The firm will aim to be on the highest iso-profit curve attainable: what is the constraint that limits how high an iso-profit curve the firm can reach?

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**In-Q7.3:** Show in a diagram the firm's profit-maximising choice of price and quantity of output. What condition is satisfied at this output level?

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**In-Q7.4:** What condition must be satisfied for total economic surplus to be maximised?

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Following your Class meeting of Week 8, you should ensure that you are able independently to be able to produce clear and comprehensive answers to these questions. To support you further in this, you should use all the resources available to you on the module, including:

Lecture Videos and Slides; the online textbook CORE: The Economy; the peer-support Forum for Unit 7; the Feedback on In-Class Questions for Unit 7; the FAQs resource. All of these resources are clearly linked on the module Moodle page.

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