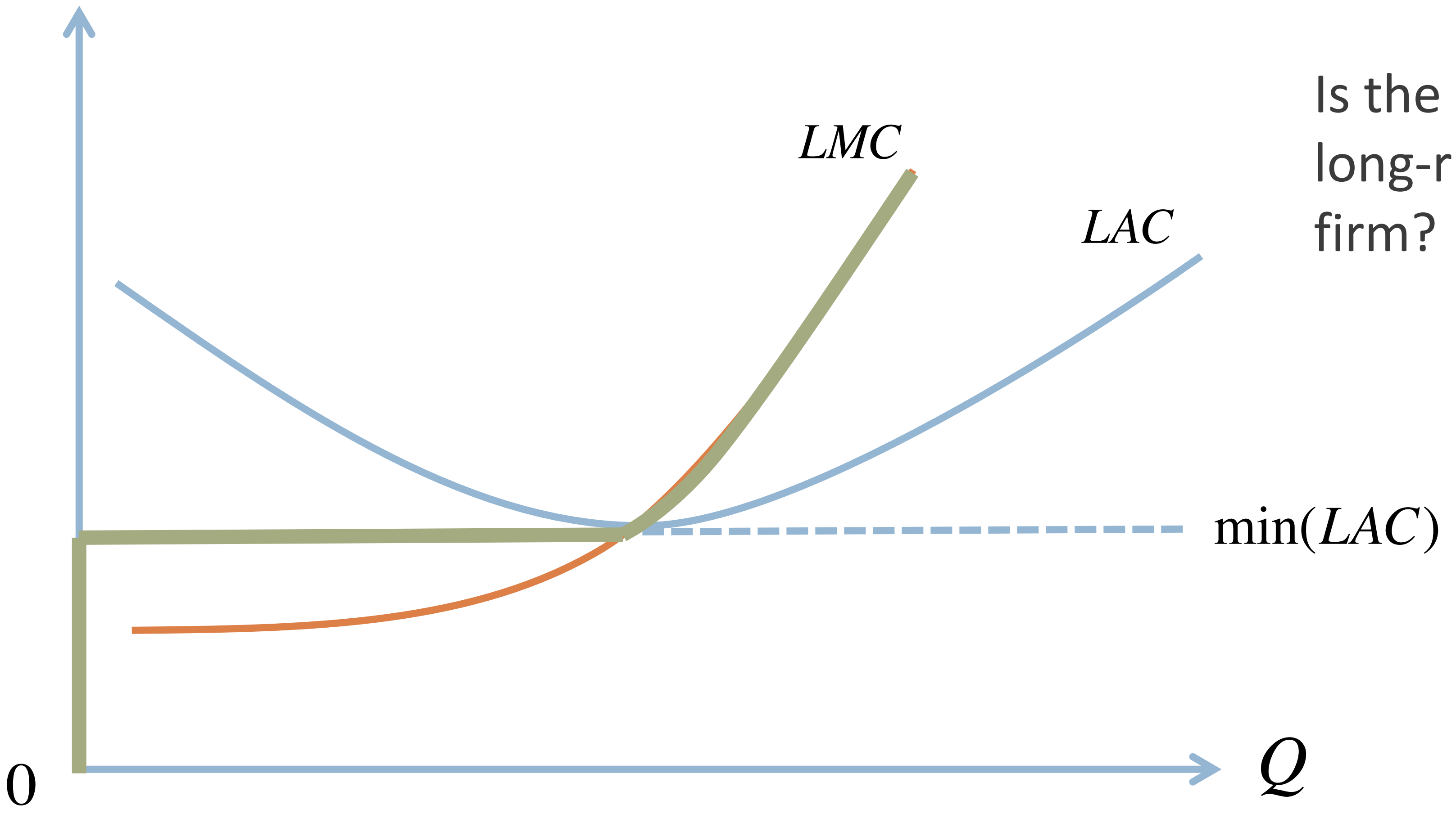
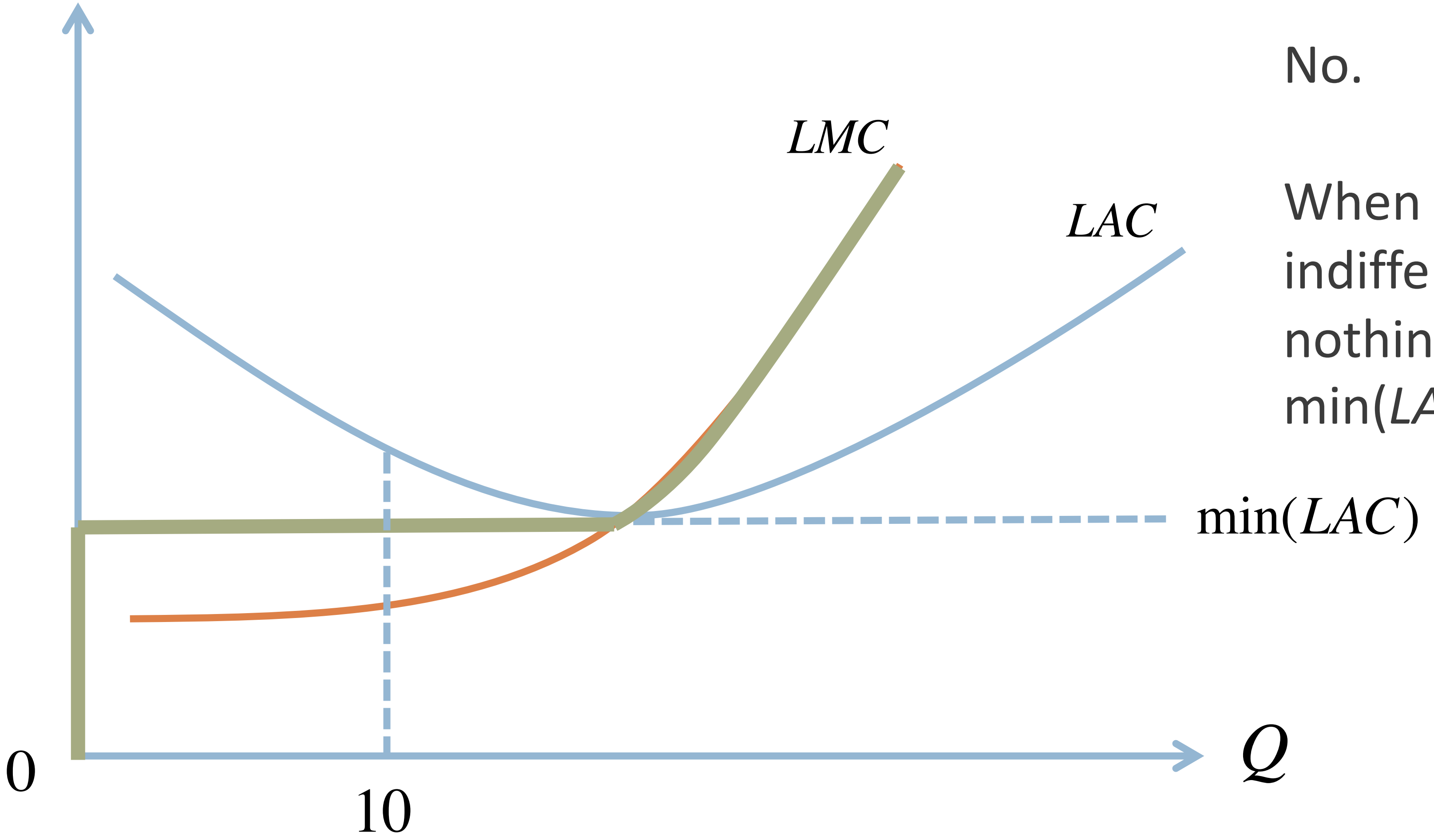
LECTURE 11
PERFECT COMPETITION IN THE LONG RUN

Question 1: Long-run Supply Curve



Is the horizontal line part of the long-run supply curve for this firm?

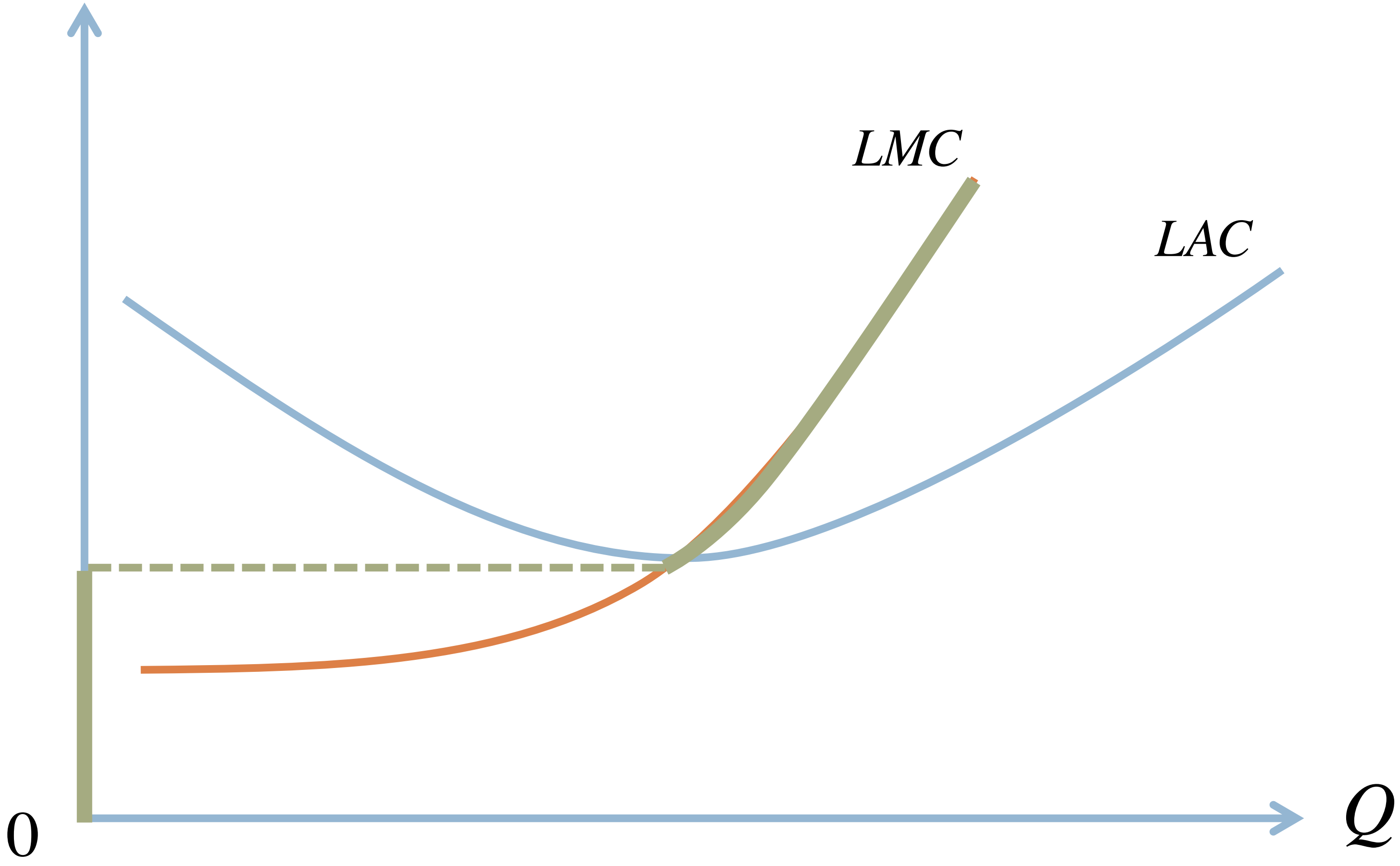
Question 1: Solution



No.

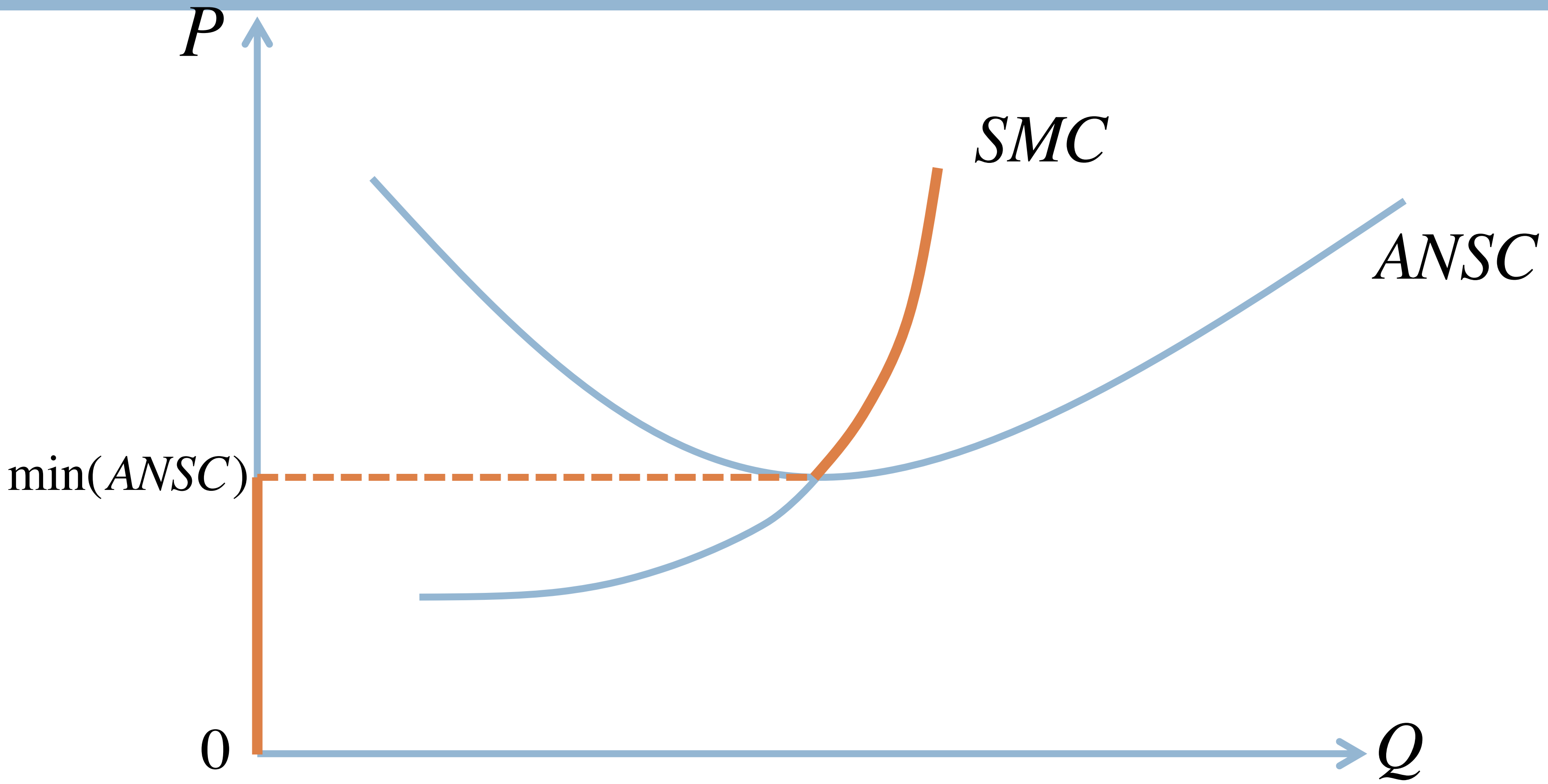
When P=min(LAC), the firm is indifferent between producing nothing and producing at the min(LAC)

Question 2: Short-run vs. Long-run Supply Curve



What is the difference between this graph and the supply curve for each firm in the short run?

Question 2: Short-run Supply Curve in Graph

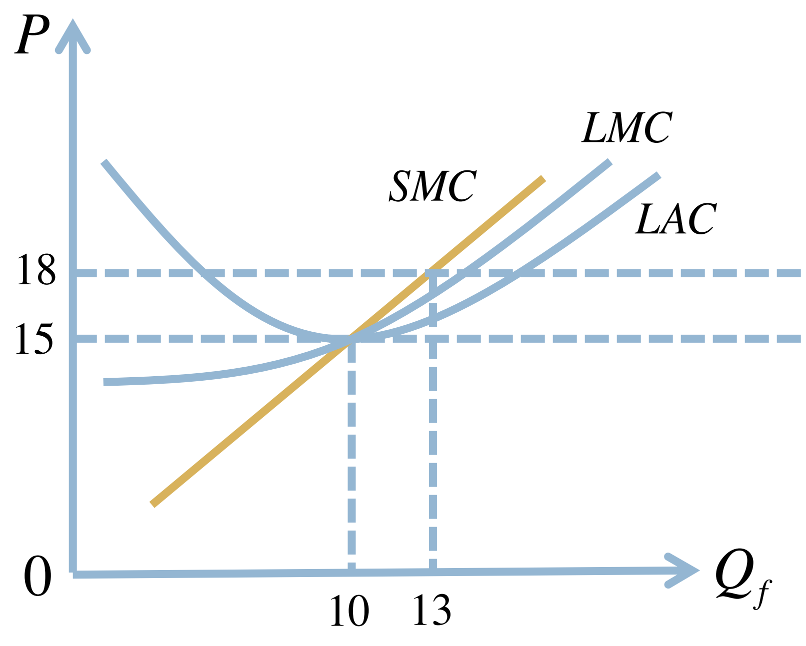


Question 2: Solution

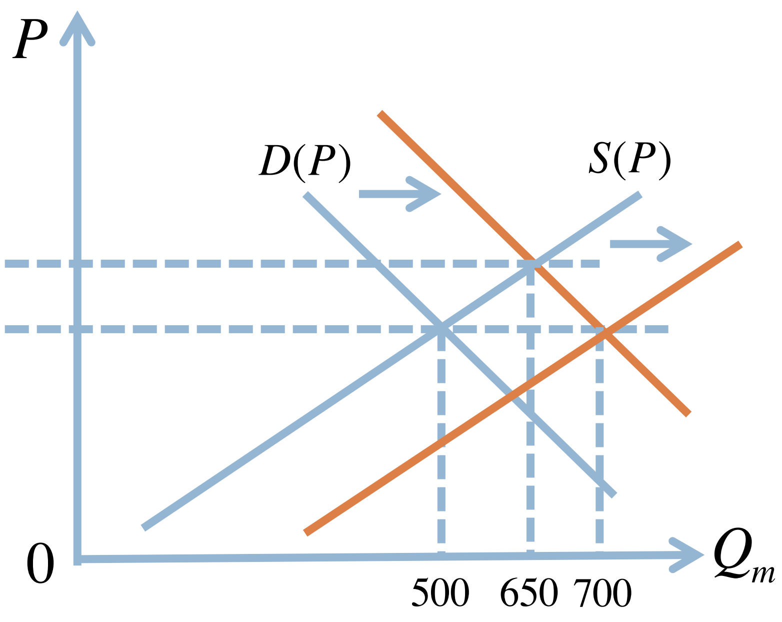
- When the firm produces
  - Short run: supply curve is the *SMC* curve
  - Long run: supply curve is the *LMC* curve
- When does the firm stop producing?
  - Short run: when price is below min(*ANSC*)
    - Not min(*SAC*)
  - Long run: when price is below min(*LAC*)

Question 3: Increase in Demand in a Constant-Cost Industry

Typical Firm's Cost and Supply



Market Equilibrium with 50 identical firms at the initial equilibrium



Equilibrium price increases in the short run but goes back to the same level in the long run

Question 3: How to explain the change in total quantity?

	Before demand increase	After demand increase	
	Long-run equilibrium	Short-run equilibrium	Long-run equilibrium
Price	15	18	15
Total quantity	500	650	700
Each firm's output	10	13	10
Number of firms	50	50	70

Question 3: Solution

- From 500 to 650
  - Short run response after the demand shock
  - No entry and exit yet
  - Each firm produces more because price increases from 15 to 18
- From 650 to 700
  - Long run response after the demand shock
  - Price drops from 18 to 15 due to entry
  - More firms in the market
  - Is each firm producing more?

Question 4: Long-run Equilibrium with Two Types of Firms

- Consider the example in the lecture
- Suppose every manager is paid the reservation wage of $70000
  - The firm with the great manager has lower cost
- Suppose for a firm with an average manager (high-cost firm)
  - min(*LAC*)=20
- For the firm with the great manager (low-cost firm)
  - min(*LAC*)=16
- What happens when *P*=16?

Question 4: Solution

- All potential entrants have average managers
  - There is only 1 great manager
  - At the price of 16, no one has incentive to enter
- Existing high-cost firms want to leave
  - They are making negative profit
- 16 is not the long-run equilibrium price if both types of firms are in the market

Q&A on Lecture 11