

Part 3

Final Review

Final Exam

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- 28 Apr, 9 am
 - ▣ Comprehensive
 - ▣ Consumer theory (lecture 1-4) accounts for 10%-15%
- Open book
 - ▣ Communication is not allowed
- Platforms
 - ▣ Exemplify (ExamSoft) for the exam
 - ▣ Zoom for invigilation
- Type of questions
 - ▣ MCQ: about 30%
 - ▣ Short answer/fill in the blank: about 70%

Exemplify

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- Exemplify does not require internet connection during the exam
 - ▣ Internet is needed when downloading and submitting the exam
- Check the minimum system requirement
 - ▣ <https://examsoft.force.com/etcommunity/s/article/Exemplify-Minimum-System-Requirements>
 - ▣ If you do not have a suitable computer, let me know asap
 - ▣ Although iPad is supported, use a computer if possible
- Download and install Exemplify
 - ▣ At www.examsoft.com/nus
- Login to Exemplify
 - ▣ See instruction
<https://wiki.nus.edu.sg/pages/viewpage.action?pageId=187598203>

Exemplify Cont'

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- Attend a CIT briefing on Exemplify via Zoom in week 13
 - ▣ Check the schedule here
<https://wiki.nus.edu.sg/display/DA/Common+Briefing+Sessions>
 - ▣ Briefing is required for those who have not used Exemplify before
- Take practice exams
 - ▣ <https://wiki.nus.edu.sg/display/DA/Practice+Exams>
- Our exam is a “secure” exam
 - ▣ Full lockdown of your computer
- Comprehensive guide for Exemplify by CIT
 - ▣ <https://wiki.nus.edu.sg/display/DA/Exemplify+Assessment+-+Student>

Zoom

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- Multiple Zoom meetings will be created for invigilation
 - ▣ The meetings will be recorded
- Install Zoom on a second device
 - ▣ Phone, iPad, or a second computer
 - ▣ Webcam and audio on the second device should be working
 - ▣ Find a way to mount your phone/iPad
- Internet connection is needed on the second device throughout the exam
- Webcam should record you and your working area
 - ▣ No virtual background is allowed

Zoom Cont'

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- “Waiting room” will be enabled
 - ▣ The invigilator will admit you to the meeting after verifying your identity
 - ▣ You will need to show your student card
- The invigilator will make announcements via Zoom
 - ▣ Exam password will be given out on Zoom
- Mute yourself on Zoom
 - ▣ But do not switch off the sound on your second device
- Communicate with your invigilator using Chat
 - ▣ And the “raise hand” function
- CIT guide for Zoom proctoring (for students)
 - ▣ <https://wiki.nus.edu.sg/pages/viewpage.action?spaceKey=THES&title=Proctoring+with+Zoom>

Short Answer Questions

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- Essentially the same as our structured questions
- On Exemplify, they are called “essay” questions
- Type your answers in the text box given
- There are some formatting options in the text box
 - ▣ But no equation editor
- No default character limit (I can set the character limit)

Fill in the Blank Questions

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- Similar to our structured question
 - ▣ There is a character limit (cannot be adjusted) for each blank
 - ▣ Solution should not be too long
- Example
 - ▣ A question with 4 blanks
 - ▣ The equation of the budget line is (1). The tangency condition is = (2).
The optimal basket is $x =$ (3), $y =$ (4).

How to type equations?

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- You will need to type simple equations
- Do not worry about superscript, subscript, or making everything italic
- Examples

$P_x x^A + P_y y^A$	PxxA+PyyA
$U(x,y) = \sqrt{x} + y$	U(x,y)=sqrt(x)+y
$Q = L^2 K$	Q=L^2K
$MRS_{x,y} = \frac{y}{x+1}$	MRSx,y=y/(x+1)

How to show workings?

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- For FITB questions
 - ▣ No need to show workings
 - ▣ The solution is either a equation/number
 - ▣ Or short explanation (1-2 sentences)
- For short answer questions
 - ▣ Show the key equations/steps
 - ▣ Do not show the steps for solving/simplifying equations

Other Logistics

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- Consultation hours (via Zoom)
 - ▣ 16-17 April: 3 pm to 5 pm
 - ▣ 21, 23-24, 27 April: 2:30 pm to 5 pm
- Final practice problems (with solution) will be posted on LumiNUS in week 13
- Grade change deadline
 - ▣ 5:30 pm, 27 Apr
- I will not answer emails after 5:30 pm on 27 Apr

Our Topics

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- Consumer Theory (Lecture 1-Lecture 4)
- Exchange (lecture 5-Lecture 6)
 - ▣ Pareto efficiency
 - ▣ Competitive equilibrium
 - ▣ First Welfare Theorem
 - ▣ Walras' law
- Production and Cost minimization (Lecture 7-Lecture 9)
 - ▣ Production function
 - ▣ Demand functions for inputs
 - ▣ Short-run and long-run cost functions
 - ▣ Relationship between short run and long run

Our Topics Cont'

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- Perfect competition (Lecture 10-Lecture 11)
 - ▣ Firm's supply curve
 - ▣ Short-run equilibrium
 - ▣ Long-run equilibrium
 - ▣ Long-run market supply curve

Homework 2 Question 1 c)

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- Consumer A's utility function is

$$U^A = x^A - 2y^A$$

- Consumer B's utility function is

$$U^B = x^B y^B$$

- The contract curve is

$$y^A = 0$$

- When A consumes y , A can give B some y and both will be better off
- When A does not consume y , if A consumes more x , B will be worse off, if B consumes more x , A will be worse off

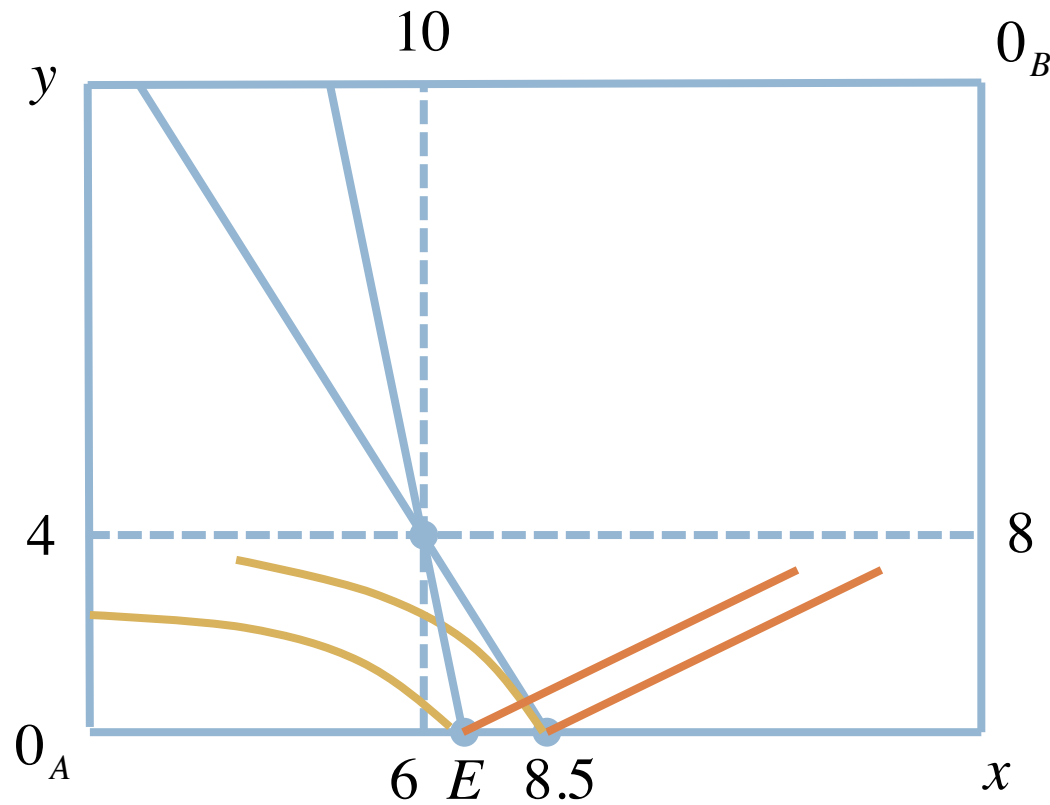
Homework 2 Question 1 d)

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- Why do we need to assume the equilibrium allocation is a tangency point?
- Equilibrium is not unique in this question
- There are more than one equilibrium prices and more than one equilibrium allocations
- Only one equilibrium allocation is a tangency point
- It is possible to have more than one equilibrium in the economy

Homework 2 Question 1 d) Cont'

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Point E is also an equilibrium

At point E, the budget line is not tangent to the indifference curve of consumer B

Homework 2 Question 2 b)

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□ There are 3 consumers and 2 goods

□ If

$$x_1^A + x_1^B - \omega_1^A - \omega_1^B = 0, \quad x_2^A + x_2^B - \omega_2^A - \omega_2^B = 0$$

□ The Walras' Law becomes

$$P_1(x_1^C - \omega_1^C) + P_2(x_2^C - \omega_2^C) = 0$$

□ But this does not mean

$$x_1^C - \omega_1^C = 0, \quad x_2^C - \omega_2^C = 0$$

Homework 2 Question 2 b) Cont'

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- If the markets for the two goods are in equilibrium, does it mean

$$x_1^C - \omega_1^C = 0, \quad x_2^C - \omega_2^C = 0$$

- No!
- When the two markets are in equilibrium, the aggregate net demand for each good is 0

$$x_1^A + x_1^B + x_1^C - \omega_1^A - \omega_1^B - \omega_1^C = 0, \quad x_2^A + x_2^B + x_2^C - \omega_2^A - \omega_2^B - \omega_2^C = 0$$

Review Question 1 (Fill in the blank)

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- A profit-maximizing firm in a perfectly competitive market currently produces at an output level where its short-run average total cost curve is upward sloping. Does it imply that the firm is earning positive profit (Answer “Yes” or “No”) (1) ? This is because (2).



Review Question 2 (Short answer)

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- Two perfectly competitive markets have the same demand curves. Every firm's *LAC* curve is U-shaped. The minimum efficient scale for firms in market 1 is higher than the minimum efficient scale for firms in market 2. The minimum level of the *LAC*, however, is the same for firms in market 1 and market 2. 
- a) Are the long-run equilibrium prices the same in the two markets? Why? 
- b) Which market has more firms in the long run equilibrium? Why?

Solution for Review Question 2

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Checklist

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- Take care of your physical and mental health
- Install Exemplify on your computer and learn how to use it
- Install Zoom on a second device
 - ▣ Get a phone/iPad stand if necessary
- Let me know asap if you do not have
 - ▣ A computer to run Exemplify/a second device for Zoom/internet
- Prepare the materials for the exam
 - ▣ Consider making a cheat sheet
- Study