Economics152b-003

Solutions to Midterm 1, February 2007

	Version 222	Version 333	Version 444	Version 555
1.	C	B	A	A
2.	D	C	B	B
3.	B	E	D and E*	B
4.	B	C	C	E
5.	A	A	A	E
6.	B	B	B	E
7.	C	D and E*	B	E
8.	E	C	E	E
9.	C	A	E	E
10.	A	B	E	D
11.	B	B	E	E
12.	D and E*	E	E	B
13.	C	E	E	C
14.	A	E	D	D
15.	B	E	E	B
16.	B	E	B	B
17.	E	E	C	A
18.	E	D	D	B
19.	E	E	B	C
20.	E	B	B	E
21.	E	C	A	C
22.	E	D	B	A
23.	D	B	C	B
24.	E	B	E	D and E*
25.	B	A	C	C

Version 222 #8, Version 333 #3, Version 444 #23, Version 555 #20

The only item that is included in the calculation of GDP is the amount paid to workers of $2 million. The others are just transfers of cash between the government and individuals. They do not reflect production activity so they are not included.

Version 222 # 12, Version 333 #7, Version 444 #3, Version 555 #24

Technically the correct answer is “d”, which looks at the conditions for Pareto optimality. Since in most situations (however, not all) competitive equilibrae also are pareto optimal, then “e” would be correct.

Version 222 #17, Version 333 #12, Version 444 #8, Version 555 #4

Growth rate = (1200 – 1500) / 1500 X 100
= - 20%

Version 222 #24, Version 333 #19, Version 444 #15, Version 555 #11

S= I + NX + NFP rec'd
= 200,000 + (130,000 – 120,000) + (15,000 – 20,000)
= 200,000 + 10,000 – 5,000
= 205,000

Problems

GDP DEFLATOR/CPI QUESTION
Version 222 #1-4, Version 333 #4-7, Version 444 #3-6, Version 555 #11-14

1. GDP Deflator in the base year is always 100

2. Real GDP using the base year price method
= Σ (base year prices(2004) x 2005 Qs)
= (1.5 x 8200) + (3 x 10500) + (2 x 9000)
= 61800

3. GDP Deflator using the chain-weighted index method… Note: the following is the method in your lecture notes and the method we did in class during the 2 in class examples. As stated in class, this is the method I expect you to use on the exam.

Compare Q_1 and Q_2 using 2005 Ps.

Real GDP in 2005 = nominal GDP in 2005 = 2005P x 2005 Q

= 1.5 x 8000 + 3 x 10000 + 2 x 9000
= 60000

%Δ from 2005 to 2006 using 2005 Ps

$$= \frac{61800 - 60000}{60000} \times 100$$

= 3%

This part is worth 1 mark.

Compare Q_1 and Q_2 using 2006 Ps.

2005 Q x 2006 P

= (2 x 8000) + (2.5 x 10000) + (2.5 x 9000)
= 63500

2006 Q x 2006 P

= 2 x 8200 + 2.5 x 10500 + 2.5 x 9000
= 65150

%Δ from 2005 to 2006 using 2006 Ps

$$= \frac{65150 - 63500}{63500} \times 100$$

= 2.6 %

Therefore, avg = 2.8%

This part above is worth 1 mark.

Real GDP in 2006
= GDP in 2005 (1 + %Δ)
= 60000 (1.028)
= 61680

This is worth 1 mark.

$$\text{Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

$$= \frac{65150}{61680} \times 100$$

= 105.63 You should NOT round your answer. This is worth 1 mark.

4. For the CPI, use Quantities in typical basket

$$= \frac{(2 \times 60) + (2.5 \times 75)}{(1.5 \times 60) + (2 \times 75)} \times 100$$

= 128.13 You should NOT round your answer

$$\Pi = \frac{135 - 128.13}{128.13} \times 100$$

= 5.36%

GDP ACCTING QUESTION
Version 222 #5-6, Version 333 #8-10, Version 444 #8-10, Version 555 #1-3

5. The deficit = all expenditures minus all revenues

= G + transfers – total taxes
= 320 + 75 – 700
= **- 305**

This means there is a *surplus of 305*.

6. GDP at factor cost
= farm income + wages + interest income + UBI + profits + depreciation

OR

= C + I + G + EX – IM – indirect taxes less subsidies

Must use the first equation because we are not given indirect taxes less subs.

= 125 + 750 + 150 + 150 + 225 + 83 = **1483**

7. GDP_{MP} = C+I+G+NX
= 800 + 350 + 320 + 225
= 1695

NDP_{MP} = GDP_{MP} - depreciation
= 1695- 83 = 1612

Version 222 #8, Version 333 #1, Version 444 #1, Version 555 #8

8. List 2 measurement problems with the CPI.

Answers are in your class notes
Version 222 #9, Version 333 #2, Version 444 #2, Version 555 #9

Answers are in your class notes

Version 222 #10, Version 333 #3, Version 444 #7, Version 555 #10
Answers are in your class notes

Chapter 4 Graph question,
Version 222 # 11-14, Version 333 #11-14, Version 444 #11-14, Version 555 #4-7

We will do this in class

NOTE: I changed the marking on this question to 6 marks rather than 4.

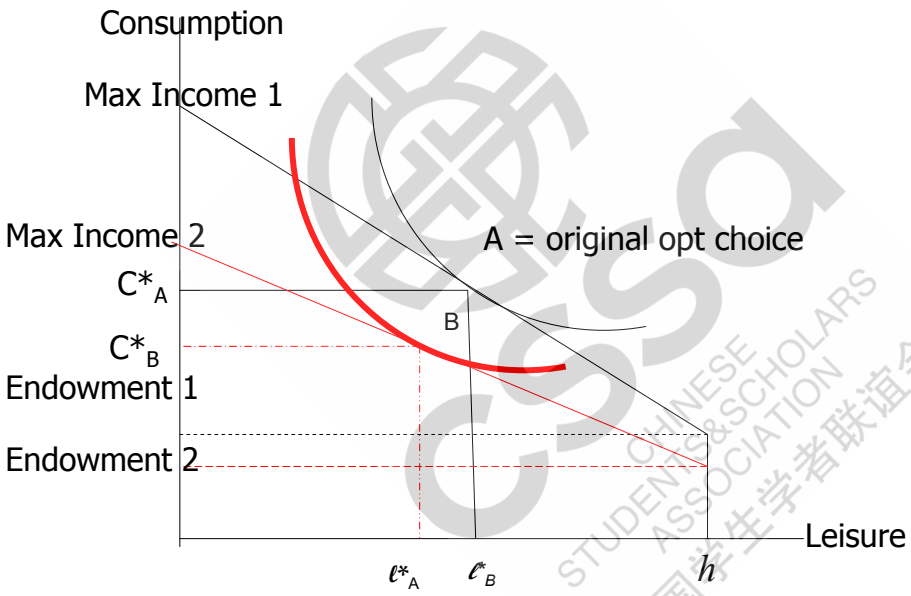
8. Since they are all moving in opposite directions..

   C falls, N??? and leisure ???

9. If the effect of taxes is greater than the effect of wages,

   Consumption will fall (1 mark)
   Leisure will fall and employment will rise (1 mark)

   Make sure your graph shows this as the final equilibrium.



Endowment 1: $\pi - T_1$
Endowment 2: $\pi - T_2$
Where $T_2 > T_1$

Max Income 2 < Max Income 1
Max Income 1 algebraically = $\pi - T_1 + w_1Ns$ or $\pi - T_1 + w_1(h - \ell)$
Max Income 2 algebraically = $\pi - T_2 + w_2Ns$ or $\pi - T_1 + w_2(h - \ell)$
Where $w_2 < w_1$

Marking scheme:

1 mark: **everything** properly labelled (including all intercepts) (It must be clear from your graph what is happening)
1 mark: original BL + IC tangent at A
2 marks: second BL + IC at B
Must show endowment shifting down for tax increase AND
Flatter line since wage rate falls.