

**Midterm Exam**

1. (15 Points) Calculate the GDP of Farmland, a fictitious economy whose numbers are listed below. Do so using all three methods (value added approach, income approach, and expenditure approach).

**Farmland, year 2000**

<b><u>Farmer Jones, (private firm)</u></b>		<b><u>FoodCo, Inc</u></b>	
Corn Sold to Govt	\$35	Sold Corn Flakes to Consumers	\$100
Corn Sold to Singapore	\$25	Bought corn from Farmer Jones	\$20
Corn Sold to FoodCo, Inc	\$20	Bought salt from Egypt	\$10
Paid workers	\$40	Paid workers	\$20
Tax on profit	\$10	Tax on Profit	\$25
<b><u>Farmland Govt</u></b>			
Taxes	\$35		
Purchase of Corn	\$35		

2. (15 Points) Suppose that the following information is given.

	Apple		Pear		Quince	
	Price (YTL)	Quantity (Kg)	Price (YTL)	Quantity (Kg)	Price (YTL)	Quantity (Kg)
2003	2	10	1	15	2	20
2004	3	12	2	16	2	25
2005	2	16	1.5	20	3	30

- (a) Find the real GDP for 2003, 2004, and 2005 in **2005 prices**.  
(b) Find the real GDP growth from 2003 to 2004 and from 2004 to 2005.  
(c) Find the inflation from 2003 to 2004 and from 2004 to 2005 (hint: use the implicit GDP deflator).

3. (25 Points) Suppose that the following equations and/or values are defined for a macroeconomy.

$$C = 500 + 0.9(Y - T); T = 500 + (0.1)Y; I = 2500 - 1000i; G = 2000$$

$$M^d = 3000 + (0.1)Y - (5000)i; M^s = 4000.$$

- (a) Find the IS equation.
- (b) Find the LM equation.
- (c) Find the equilibrium  $Y$  and  $i$ .
- (d) Find the equilibrium disposable income, consumption, saving, and budget deficit.

**4. (15 Points)** Suppose that the firm's markup over costs is 5%, and the wage-setting equation is  $W = P(1 - u)$ , where  $u$  is the unemployment rate.

- (a) What is the real wage as determined by the price-setting equation?
- (b) What is the natural rate of unemployment?
- (c) Suppose that the markup prices over costs increases to 10%. What happens to the natural rate of unemployment? Support your answer by a figure.

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5. (15 Points) Turkish government has been experiencing fiscal deficit for years. Suggest a policy mix to achieve a decrease in fiscal deficit while keeping  $Y$  constant (assume that price does **not** change). Please do illustrate and discuss your answer.

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**6. (15 Points)** Using the AS/AD model, show the effects of a **decrease** in taxes on the position of the AD, AS, IS, and LM curves in the short run and long run. Discuss the effect on output, the interest rate, and the price level in the medium run. Assume that before the changes, the economy was at the natural level of output.

**Bonus Question (10 Points)**

Suppose that income expenditure equation is  $Y = c_0 + c_1(Y - \bar{T}) + \bar{I} + \bar{G}$ . Suppose that both  $\bar{G}$  and  $\bar{T}$  increase by 10 points. Does the equilibrium GDP change or not? Show.