

Middle East Technical University
Faculty of Economic and Administrative Sciences
Department of Economics
Econ 102 All Groups

NAME: _____
SECTION: _____

April 3, 2001

Type B
1st MIDTERM EXAMINATION
(Time Allowed: 90 minutes)

PART I (15 Points):

WRITE A WELL STRUCTURED ESSAY ON THE FOLLOWING:

Suppose you are an economic advisor to the government of **NEREMY**, a small island where there is no population growth. The prime minister asks you to prepare a report about the economic performance of **NEREMY** during the last two years. Using the following data and making and showing the necessary calculations, write a well-structured essay about the major macroeconomic variables (such as the rate of inflation, the growth rate of real GDP and the income gap). Your essay should also include, explanations about the state of the business cycle, changes in the rate of unemployment and per capita income.

<u>YEAR</u>	<u>Nominal GDP</u>	<u>Real GDP</u>	<u>Potential GDP</u>	<u>Price Index (Year1=100)</u>
1	450	300	400	150
2	531	322	400	165

Part II (35 points):
SHOW ALL CALCULATIONS

An economy is characterized by the following relationships (in TL):

$$C = 83 + 0.8Y_d$$

$$NT = 10 + 0.1Y$$

$$I = 60$$

$$G = 55$$

$$X = 20$$

$$M = 10 + 0.12Y$$

where

Y = National income

C = Consumption

X = Exports

Y_d = Disposable income

I = Investment

M = Imports

NT = Net taxes

G = Government spending

1. (1 pts) Write the private saving equation as a function of Y_d .
2. (1 pts) Write the C equation as a function of national income.
3. (1 pts) Write the private saving equation as a function of national income.
4. (1 pts) Write the aggregate expenditure equation as a function of national income.
5. (1 pts) Marginal propensity to consume out of Y is _____.
6. (1 pts) Marginal propensity **not** to spend out of national income is _____.
7. (1 pts) The equilibrium level of national income is _____ TLs.

8. (1 pts) At equilibrium level of national income, there is a budget _____ (deficit/surplus) of _____ TLs.
9. (3 pts) At the equilibrium level of national income, net exports are _____ (positive/negative) and the domestic economy _____ (borrows from/ lends to) the world _____ TLs.
10. (2 pts) Write the national saving equation as a function of national income. At the equilibrium level of national income, national saving is _____ TLs.
11. (2 pts) Write the national asset (capital) formation equation as a function of national income. At the equilibrium level of national income, national asset (capital) formation is _____ TLs.
12. (3 pts) Show how investment is financed in this economy by calculating the levels of private saving, public saving and foreign borrowing separately.
13. (2 pts) At the equilibrium level of national income, injections are _____ TLs.
14. (2 pts) At the equilibrium level of national income, withdrawals are _____ TLs.
15. (2 pts) Government purchases multiplier = $k_G =$ _____.
16. (2 pts) Tax multiplier = $k_T =$ _____.

17. (3 pts) Balanced budget multiplier = k_{bb} = _____.

18. (3 pts) If exports increase by 10 TLs, new AE equation will be _____ (increase/decrease) by _____ TLs.

19. (3 pts) If the government wishes to eliminate the autonomous tax, ie. to reduce the lump sum tax by 10 TLs, national income will _____ (increase/decrease) by _____ TLs.

Part III Multiple Choice (25x2=50 pnts.):

51. A decrease in the price level will cause
- A. an upward shift in the AE curve
 - B. an upward shift in the net export function
 - C. an upward shift in the consumption function
 - D. all of the above
 - E. none of the above
52. One reason that the aggregate demand curve slopes downward is
- A. that aggregate expenditure increases as the price level rises
 - B. that as the price level falls, firms must compete more when output increases
 - C. that an increase in the price level causes consumers to substitute foreign goods for domestic goods
 - D. that increased production results in lower production costs
 - E. all of the above
53. The short-run aggregate supply curve slopes upward because
- A. aggregate demand increases at higher levels of national income
 - B. unit costs rise at higher levels of output
 - C. inputs become more expensive at higher levels of output
 - D. unit costs fall at higher levels of output
 - E. inputs become less expensive at higher levels of output

54. When a shift in aggregate demand occurs, the effect will be divided between a change in output and a change in price level. How the effect is divided depends on
- the position of the AE curve
 - the slope of the SRAS curve
 - the amount of inflation in the economy
 - the size of the multiplier
 - the slope of the AD curve
55. If major labour unions succeed in increasing wages, this will cause
- the SRAS curve to shift upward (to the left) and then return immediately to its original position
 - both the SRAS and AD curves to shift in opposite directions
 - the SRAS curve to shift downward (to the right), reducing the price level
 - the SRAS curve to shift upward (to the left), increasing the price level
 - the SRAS curve to shift downward (to the right) and then return immediately to its original position.

Table 1 shows total output for an economy over 2 years. Assume 1998 is the base year.

Table 1

1998	Price	Quantity
Good A	1TL	100 units
Good B	2TL	200 units
Good C	5TL	100 units

1999	Price	Quantity
Good A	2TL	120 units
Good B	3TL	200 units
Good C	10TL	98 units

56. Refer to Table 1. Assuming 1998 is the base year, the real GDP in 1999 was
- 840TL
 - 700TL
 - 970TL
 - 1740TL
 - 1010TL
57. Refer to Table 1. The implicit GDP deflator in 1999 was approximately
- 105
 - 193
 - 160
 - 203
 - 180
58. GDP measures tend to understate the economic welfare of less-developed countries because these countries tend to
- have a large share of nonmarket activities
 - import much more than they export
 - have a high degree of foreign direct investment
 - emphasize agricultural and resource-based production

59. Which of the following are the basic assumptions about the consumption function?
- A. The MPC and APC are always less than unity
 - B. As income rises, the MPC falls and the APC rises
 - C. The MPC is greater than zero and less than one and the APC falls as income rises
 - D. The APC is greater than zero and less than one and the MPC falls as income rises
 - E. Below the break-even level, $APC > 1$ and $MPC < 0$
60. Increased wealth
- A. does not affect consumption because the increase is always expected
 - B. does not affect consumption because consumption is a function of disposable income only
 - C. tends to lead, ceteris paribus, to an upward shift in the consumption function
 - D. tends to lead, ceteris paribus, to a downward shift in the consumption function
 - E. only affects saving, not consumption
61. A nation's real national income measures
- A. the opportunity cost of the economy's national output
 - B. the TL income earned by the nation's producing sector
 - C. the value of national output produced by the economy, measured in constant TL
 - D. the level of national income that is subject to taxation by the government
 - E. the market value of national output produced in the economy
62. Which of the following statements about real national income is NOT correct?
- A. It equals nominal national income
 - B. It gives a constant TL value to national output
 - C. It refers to national income after adjusting for changes in prices
 - D. It changes only when output quantities change
63. If an employer and workers enter into a wage contract specifying a nominal wage increase of 8 percent but the price level rises by 11 percent over the course of the contract,
- A. the employer will experience a greater fall in purchasing power than would have occurred if the price level had held steady
 - B. the workers' purchasing power will rise
 - C. the workers' purchasing power will fall
 - D. both employer and workers will benefit in increased purchasing power
64. If nominal national income increased by 10 percent over a certain period of time while real national income increased by 20 percent then
- A. everybody in the economy became worse off
 - B. the price level has increased by approximately 10 percent
 - C. inflation has occurred during this time period
 - D. the labour force increased by 10 percent
 - E. the price level has declined by about 10 percent
65. The value of intermediate products
- A. should be subtracted from the total sales revenue of firms in determining value added
 - B. should always be counted as part of GDP in the expenditure approach
 - C. should be added to the value of other inputs in determining a firm's contribution to GDP
 - D. must equal value added by the firm
 - E. is counted as factor income in the calculation of GDP from the income side

66. Which of the following statements concerning investment and investment goods is FALSE?
- A. Housing construction is counted as investment expenditure rather than consumption expenditure.
 - B. An accumulation of inventories counts as current investment
 - C. The total amount of capital goods in a country is called capital stock.
 - D. Net investment is equal to gross investment minus depreciation
 - E. The capital consumption allowance refers to funds for investment to increase the economy's total stock of capital
67. Net domestic product is a useful concept primarily because it
- A. does not include inventory investment
 - B. includes government transfer payments
 - C. includes all goods produced but not exchanged in markets
 - D. represents national income plus depreciation
 - E. represents national income net of depreciation
68. In a particular country the nominal national income fell from 100 to 95 during the year. At the same time inflation was 5 percent. Therefore the real national income
- A. was unaffected
 - B. rose by 10 percent
 - C. fell by 5 percent
 - D. rose by 5 percent
 - E. fell by 10 percent
69. If the Smith family's disposable income increases from 1200TL to 1700TL and their desired saving increases from -100TL to +100TL, then the family's
- A. average propensity to consume is 0.60
 - B. average propensity to save is 0.40
 - C. marginal propensity to consume is 0.40
 - D. marginal propensity to consume is 0.60
 - E. marginal propensity to save is 1
70. A rise in the real rate of interest _____ the opportunity cost of holding an inventory of a given size, and thus _____ desired investment expenditure.
- A. decreases, decreases
 - B. increases, increases
 - C. increases, decreases
 - D. decreases, increases
71. In a closed economy with no government, suppose $S = -200 + 0.1Y$. Equilibrium income would be 5000 if investments (I) were
- A. 1000
 - B. 700
 - C. 5000
 - D. 300
 - E. 500

72. In a closed economy with no government, if the business community decreases its investment expenditures by 40 billion TL, causing equilibrium income to fall by 120 billion TL, the marginal propensity to spend is

- A. $\frac{2}{3}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$
- D. $\frac{2}{5}$
- E. $\frac{4}{5}$

73. Adding induced imports to the macro model causes the AE curve to

- A. shift downward parallel
- B. become steeper
- C. become flatter
- D. remain unchanged
- E. shift upward parallel

74. If $(S+T+IM)$ exceeds $(I+G+X)$, injections _____ leakages and national output will _____ toward its equilibrium level

- A. are less than; fall
- B. exceed; rise
- C. exceed; fall
- D. are less than; rise

75. A decrease in the value of the multiplier can be caused by

- A. an increase in the marginal propensity to spend
- B. an increase in the marginal propensity to consume
- C. a decrease in the marginal propensity to import
- D. a decrease in income-tax rates
- E. an increase in the marginal propensity to save