

April 4, 2005

TYPE B
FIRST MIDTERM EXAMINATION
 (Time Allowed: 100 minutes)

PART I. ANSWER ALL OF THE FOLLOWING QUESTIONS. Show all of your calculations clearly. If you do not show your calculations, you cannot receive full points.

1.1. (10 pts) Some information about the economy of Happyland is provided in Table 1 below. HL refers to the currency used in Happyland

Table 1.1. Happyland Economy - 2004 (in billion HL)

Macroeconomic variables in Happyland in 2004	Billion HL
GDP	735
GNP	725
NNP	700
National Income	700
Personal Income	740
Disposable Income	650
Subsidies	10
Social security payments	30
Government purchases	90
Imports	40
Payments of factor income to the rest of the world	30
Net private investment (domestic)	150
Consumption expenditures (private)	450
Exports	60
Retained earnings (undistributed profits)	10
Indirect taxes	10
Corporate taxes	0

Calculate the following for the economy of Happyland. Show your calculations clearly in answering the following questions.

1.1.a. (1pt) Net factor income from the rest of the world is _____ HL.

1.1.b. (2 pt.) Receipts of factor income from the rest of the world are _____ HL.

1.1.c. (1 pt.) Depreciation is _____ HL.

1.1.d. (2 pt.) Income taxes are _____ HL.

1.1.e. (2 pt.) Transfer payments are _____ HL.

1.1.f. (2 pts) Explain very briefly why income and expenditure approaches to the measurement of national income give equal results.

1.2. (30 points) The economy of Taxland is described as follows:

$$C = 10 + 0.6Y$$

$$I = 50$$

$$T = 100 + 0.2Y$$

$$G = 60$$

Where

C = Private consumption

T = Net taxes

I = Private investment

G = Government purchases

Y = National income, national output

Y_d = Disposable income

TL = The currency unit of Taxland

Show your calculations clearly in answering the following questions.

1.2.a. (2 pts.) Write the saving equation in terms of Y.

1.2.b. (1 pts.) The marginal propensity to save out of Y is _____.

1.2.c. (3 pts.) The marginal propensity to consume out of Y_d is _____.

1.2.d. (3 pts.) Write the consumption equation in terms of Y_d .

1.2.e. (1 pt.) Calculate the equilibrium level of Y for this economy by using the Aggregate Expenditure method. The equilibrium level of Y is _____ TL.

1.2.f. (3 pts.) Are leakages equal to injections in this economy at equilibrium? Show it by calculating the level of injections and leakages at equilibrium.

Injections = _____ ML

Leakages (withdrawals) = _____ ML.

1.2.g. (2 pt.) The budget (deficit/surplus) _____ of Taxland at equilibrium is _____ TL.

1.2.h. (6 pts.) If the budget is as in (1.2.g) and the government wishes to achieve budget balance by changing only the level of government purchases, then it must (increase/decrease) _____ government spending by _____ TL. Since the government purchases multiplier (k_G) is _____ then Y would (increase/decrease) by _____ TL and the equilibrium Y becomes _____ TL.

1.2.i. (3 pts.) Explain the sequence of events after the government changes its spending as described in (1.2.h.) until the new equilibrium is reached. Draw a diagram to support your explanation by showing the original equilibrium at (1.2.e) and the new equilibrium at (1.2.h)

1.2.j. (5 pts.) If the budget is as in (1.2.g) and the government wishes to achieve budget balance by changing only the level of lump-sum taxes, then it must (increase/decrease) _____ autonomous taxes by _____ TL. Since the lump-sum tax multiplier (k_T) is _____ then Y would (increase/decrease) by _____ TL and the equilibrium Y becomes _____ TL.

1.2.k. (1 pt.) The balanced budget multiplier k_{BB} for this economy is _____.

1.3. (10 pts.) Assume that only three goods (A, B, and C) are produced in Microland. Prices of those goods in Microland currency (ML) and the quantities produced (units) in 1998 and 1999 are given in Table 1.3. Use 1998 as the base year in all of your calculations.

Table 1.3. Prices and Production of A, B, C in Microland in 1998 and 1999

1998			1999		
Goods	Price (ML)	Quantity (units)	Goods	Price (ML)	Quantity (units)
Good A	1	100	Good A	2	120
Good B	2	200	Good B	3	200
Good C	5	100	Good C	10	98

Show your calculations clearly in answering the following questions.

1.3.a. (1.5 pts.) Nominal GDP was _____ ML in 1998 and _____ ML in 1999.

1.3.b. (1.5 pts.) Real GDP was _____ ML in 1998 and _____ ML in 1999.

1.3.c. (2 pts) The implicit GDP deflator was _____ in 1998 and approximately _____ in 1999.

1.3.d. (2 pts.) If all three goods constitute the market basket of a typical consumer, CPI was _____ in 1998 and _____ in 1999.

1.3.e. (2 pts) The inflation rate in 1999 calculated by using the GDP deflator was _____ and the inflation rate in 1999 calculated by using the CPI was _____.

1.3.f. (1 pt.) In general, do you prefer the implicit GDP deflator or CPI in measuring the inflation rate? Discuss.

PART II. MULTIPLE CHOICE (25 x 2 = 50 pts)

1. Which of the following statements is correct?
 - a. Investment represents household purchases of financial assets.
 - b. Consumption does not include spending by firms and households on new capital.
 - c. Consumption includes spending on inventory and new residential buildings.
 - d. Net exports are exports minus imports plus factor receipts from abroad.
2. Which of the following is a CORRECT sequence of events during an expansion?
 - a. Unemployment falls, income falls, tax revenue falls, unemployment benefits rise and the budget deficit falls.
 - b. Unemployment rises, income falls, tax revenue falls, unemployment benefits rise and the budget deficit rises.
 - c. Unemployment rises, income falls, tax revenue rises, unemployment benefits fall and the budget deficit falls.
 - d. Unemployment falls, income rises, tax revenue rises, unemployment benefits fall and the budget deficit falls.
3. Presence of automatic stabilizers means that the budget deficit is _____ than it otherwise would be in a recession and _____ than it otherwise would be in an expansion.
 - a. larger; smaller
 - b. smaller; larger
 - c. smaller; smaller
 - d. larger; larger
4. As the marginal propensity to spend increases, the aggregate expenditure curve becomes _____ and the multiplier _____.
 - a. flatter; decreases
 - b. flatter; increases
 - c. steeper; increases
 - d. steeper; decreases
5. The balanced budget multiplier relies on the fact that
 - a. equal increases in taxes and government spending have no effect on equilibrium income.
 - b. equal increases in taxes and government spending reduce equilibrium income.
 - c. equilibrium income depends on the size of the deficit but not on the absolute size of the budget.
 - d. changes in government spending have a greater effect on equilibrium income than do changes in taxes.
6. Whether an economy is expanding or contracting is judged by measuring
 - a. the unemployment rate.
 - b. the rate of change in economic activity.
 - c. the rate of change in the overall price level.
 - d. the rate of change in economic activity and the rate of change in the overall price level.

7. Which of the following is NOT a cause of unemployment?
 - a. The unemployment rate.
 - b. Crime, divorce, and remarriage.
 - c. The unemployment rate.
 - d. The natural rate of unemployment.
8. If the economy is in a recession, the natural rate of unemployment is _____ than the actual rate of unemployment.

7. Which of the following statements about unemployment is false?
- The unemployment rate may rise even if employment is increasing.
 - Crime, divorce, and social unrest are all positively correlated with unemployment.
 - The unemployment figures include discouraged workers who have stopped actively looking for work, but exclude the voluntarily unemployed.
 - The natural rate of unemployment (NAIRU) is the measured unemployment rate when the economy is at full employment.
8. If economists want to estimate the effect of a given change in desired investment on national income, they would multiply the change in desired investment by the
- average propensity to save.
 - marginal propensity to save.
 - equilibrium level of national income.
 - reciprocal of the marginal propensity not to spend.
 - reciprocal of the average propensity to spend.
9. Which of the following are the basic assumptions about the consumption function?
- Below the break-even level (where $Y=C$), $APC > 1$ and $MPC < 0$.
 - The MPC and APC are always less than unity.
 - As income rises, the MPC falls and the APC rises.
 - The MPC is greater than zero and less than one and the APC falls as income rises.
 - The APC is greater than zero and less than one and the MPC falls as income rises.
10. Transfer payments are not included in the government component in the calculation of GDP because
- they do not represent a payment for a good or service.
 - they are not counted as income by any economic agent.
 - they do not generate additional income in the economy.
 - it is difficult to assess the market value of a transfer payment.
 - they are small enough to ignore when computing the national accounts.
11. An increase in the marginal propensity to spend out of national income will cause
- a change in the slope of the AE curve.
 - an upward parallel shift in the AE curve.
 - a movement up the AE curve.
 - a movement down the AE curve.
 - a downward parallel shift in the AE curve.
12. Suppose a budget deficit initially exists (i.e. $G > T$). Now suppose there is an equal increase in both government purchases of goods and services and taxes. Given this information, we know that this policy will cause
- output to increase and the budget deficit to decrease.
 - output to increase and the budget deficit to increase.
 - no change in output.
 - no change in the size of the budget deficit.
 - a reduction in output.

Refer to the information provided in Table 2.1 below in answering the questions 13-15.

Table 2.1 Labor Market in Maxiland

Labor force participation rate	65%
Working age population	210 million
Unemployment rate	5%

13. Refer to Table 2.1. The labor force
- equals 75.5 million
 - equals 136.5 million
 - equals 150 million
 - cannot be determined from this information

14. Refer to Table 2.1. The total number of people employed is
- 129.67 million.
 - 128.92 million.
 - 126.96 million.
 - 131.83 million.
 - cannot be determined from this information.

15. Refer to Table 2.1. The total population
- is 210 million.
 - is 130.65 million.
 - is 250.5 million.
 - cannot be determined from this information.

16. In a closed economy with no government, suppose consumption is \$ 10000 when income is \$ 9000 and MPS equals 0.1. When income increases to \$ 9500, consumption is

- \$ 8500.
- \$ 10450.
- \$ 10500.
- \$ 10050.

17. The demanders in the goods and services market are
- households and business firms
 - households, the government and the rest of the world.
 - the government and business firms
 - households, the government, business firms and the rest of the world.

18. Increased wealth
- does not affect consumption because consumption is a function of disposable income only.
 - does not affect consumption because the increase is always expected.
 - tends to lead, ceteris paribus, to an upward shift in the consumption function.
 - tends to lead, ceteris paribus, to a downward shift in the consumption function.
 - only affects saving, not consumption.

the information provided in Table 2.2 below in answering the questions 19-

Table 2.2 Aggregate Income and Saving in Miniland*	
Aggregate Income (ML)	Aggregate Saving (ML)
0	-150
100	-140
300	-120
600	-90
1000	-50

* Miniland is a small **closed** economy with no government. (ML=Miniland currency)

19. Refer to Table 2.2. The equation for the Aggregate Saving function is

- a. $S = -50 + 0.2Y$.
- b. $S = -120 + 0.3Y$.
- c. $S = -150 + 0.1Y$.
- d. $S = -100 + 0.9Y$.

20. Refer to Table 2.2. Society's MPC is

- a. 0.1.
- b. 0.2.
- c. 0.3.
- d. 0.9.

21. Refer to Table 2.2. At an aggregate income level of ML 1500, aggregate consumption would be

- a. ML 1200.
- b. ML 1350.
- c. ML 1450.
- d. ML 1500.

22. Refer to Table 2.2. Assuming society's MPC is constant, at an aggregate income of ML 2000, aggregate saving would be _____.

- a. ML 50
- b. ML 200
- c. ML -60
- d. ML -150

23. Gross Domestic Product (GDP)

- a. includes all goods and services sold in a given period.
- b. includes sales of stocks and bonds.
- c. includes sales of intermediate goods.
- d. includes sales of raw materials.
- e. excludes used home sales because no new production takes place.

24. At the break-even level of income, the

- a. MPC equals zero.
- b. MPS equals zero.
- c. APC equals one.
- d. APS is greater than zero but less than one.
- e. MPC equals one.

25. All of the following statements about inflation are true except
- a. Inflation reduces the real value of nominal debt.
 - b. Inflation reduces the real value of fixed money incomes.
 - c. The purchasing power of money is positively related to the price level.
 - d. A fully anticipated inflation has no real effects.
 - e. An unanticipated inflation benefits debtors.