

Matr.-Nr. _____

Name: _____

Examination

Economics II/Intermediate
Macroeconomics (No. 5025)

Examiners:

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Semester:

Summer Semester 2005

The following aids may be used:

Non-programmable pocket calculators;
English language dictionaries without
any marking.

Time:

120 minutes

This exam comprises 30 problems. For each problem exactly one of the three optional answers is correct. Do not mark more than one answer to any of the questions, otherwise the solution will be considered false. For every correct answer you obtain 2 points, for every false answer 1 point is subtracted. If no answer is marked you neither obtain nor lose a point. In order to pass this exam at least 20 points are needed.

Make sure that this copy of the exam bears your matriculation number and name in the appropriate fields at the top of this page!

Examination Questions:

1. Aggregate private consumption expenditure amounts to 1200, government consumption is 300, total investment is 400, the value of exports is 200, and the value (in domestic currency) of imports is 300. The balance of international factor income payments is 100. The balance of international unilateral transfers is -100. The depreciation on the capital stock is estimated at 250. If enterprises receive subsidies of 225 and pay indirect taxes in the amount of 475 then national income is

- | | | |
|--------------------------|----|-------|
| <input type="checkbox"/> | a) | 1300; |
| <input type="checkbox"/> | b) | 1400; |
| <input type="checkbox"/> | c) | 1650. |

2. Assume that GDP in period t consists of two types of final good produced in quantities x_t and y_t at prices p_t and q_t , respectively. If $x_1 = 2, x_0 = 1; y_1 = 1, y_0 = 2; p_1 = 10, p_0 = 5; q_1 = 5, q_0 = 10$, then the conventional index registers an inflation rate of the GDP price index from the base period 0 to the current period 1 of

- | | | |
|--------------------------|----|---------|
| <input type="checkbox"/> | a) | 0 %. |
| <input type="checkbox"/> | b) | + 25 %. |
| <input type="checkbox"/> | c) | - 20 %. |

3. In order to double GDP within two decades, the average annual growth rate over twenty years has to be roughly

- a) 3.5 %.
- b) 7 %.
- c) 10 %.

4. The government decides to let the budget deficit for the current fiscal year grow by 10 billion euros. It considers three options: (A) raising government consumption by 10 billion, (B) raising social spending by 10 billion, (C) cutting property taxes by 10 billion. Which of the following statements is correct?

- a) The increase in effective demand (in the current year) is bigger if (A) instead of (B) is taken.
- b) The rise in effective demand if case (C) is chosen is bigger than if (B) is chosen.
- c) For effective demand it does not matter whether the government opts for (C) or (A).

5. Private households become more optimistic about their future incomes and, consequently, reduce their autonomous saving by 100 billion. The private marginal propensity to save (*mps*), government and enterprise saving, and aggregate investment do not change. Which of the following statements about short-run equilibrium is correct?

- a) Aggregate saving does not change.
- b) Effective demand does not change.
- c) Aggregate private consumption does not change.

6. Assume that for a constant private *mps*, aggregate tax revenue T is a linear function of GDP, $T = tY$, $0 < t < 1$. For given fluctuations in aggregate investment expenditures the corresponding fluctuations in total effective demand are

- a) the bigger the lower the tax rate t is.
- b) the smaller the lower the tax rate t is.
- c) independent of the size of t .

7. Assume that monetary policy succeeds in keeping the interest rate constant. Aggregate investment depends negatively on the interest rate and positively on current GDP with a marginal spending rate of 0.2. The private households' marginal propensity to save (*mps*) is 0.8; the marginal tax rate is 0.5. If the government increases social transfers to households by 15 billion, aggregate effective demand increases by

- a) more than 10 billion.
- b) 10 billion.
- c) less than 10 billion.

8. Consider the IS -curve of the economy characterized in problem 7. A reduction of the marginal tax rate

- a) makes the IS -curve flatter.
- b) makes the IS -curve steeper.
- c) does not change the slope of the IS -curve.

9. Assume that people hold money only for transactions purposes and behave according to the Baumol-Tobin model. Then the velocity of money (in the sense of the so-called quantity equation)

- a) rises underproportionately with a rise in real income.
- b) rises overproportionately with a rise in real income.
- c) does not depend on real income.

10. According to the standard IS - LM model the effect of fluctuations of aggregate investment on effective demand is the more pronounced

- a) the higher is the interest elasticity of money demand.
- b) the lower is the interest elasticity of money demand.
- c) does not depend on the interest elasticity of money demand.

11. Aggregate money demand by the non-banking public is 1000 billion, the public holds currency and bank deposits in a proportion of 1 to 4, and the banks hold 25 % of their deposits as reserves. Then the total demand for central bank money (by banks and the public) is

- a) 300 billion.
- b) 400 billion.
- c) 500 billion.

12. For a given supply of base money, the crowding-out effect of a rise in the government budget deficit on private investment is the more pronounced

- a) the higher is the interest elasticity of bank reserves.
- b) the lower is the interest elasticity of bank reserves.
- c) does not depend on the interest elasticity of bank reserves.

13. As long as the economy is not caught in a liquidity trap, the price elasticity of the AD -curve

- a) depends positively on the interest elasticity of investment demand.
- b) depends negatively on the interest elasticity of investment demand.
- c) does not depend on the interest elasticity of investment demand.

14. Assume that an economy is in a liquidity-trap equilibrium. Then the AD -curve is completely price-inelastic unless

- a) current investment demand depends positively on current real GDP.
- b) current aggregate consumption depends positively on real money balances.
- c) real money demand depends positively on total real financial wealth.

15. Assume that the current actual rate of inflation is kept constant. Then, according to the expectations-augmented Phillips curve, a lower expected rate of inflation results in

- a) a lower unemployment rate.
- b) a higher unemployment rate.
- c) no change in the unemployment rate.

16. Assume that the marginal productivity of labor is constant in the short run and equal to 1. The producers' mark-up on marginal costs is 5 %. The nominal wage is given by $P^e (1-u)$, where P^e is the expected output price level and u the current rate of unemployment. Then the natural rate of unemployment is

- a) 5 %.
- b) higher than 5 %.
- c) lower than 5 %.

17. For the model of problem 16 it is assumed that in the short run there is some fixed "unproductive" employment $N_0 > 0$. This implies an AS -curve with a price elasticity of real GDP which

- a) rises with an increase in GDP.
- b) is equal to 1.
- c) falls with an increase in GDP.

18. A medium-run equilibrium is disturbed by a once-and-for-all, permanent 20 % expansion of money supply. Without any further government action

- a) the price level rises immediately by 20 % without any rise in output.
- b) the price level rises in the medium run by 20 % while real GDP and the interest rate return to their previous (natural) levels.
- c) the real GDP stays in the medium run at a higher level (and the interest rate at a lower one) than before the monetary expansion.

19. Assume that the extent of monopolisation in the markets for goods and services increases permanently. Which of the following three statements is wrong?

- a) Without any change in fiscal and monetary policy, the price level rises in the short run in proportion to the increase in the mark-up, without a change in real GDP.
- b) Without any change in fiscal and monetary policy, real GDP falls in the medium run while the price level rises by more than in the short run.
- c) By a restrictive monetary or fiscal policy the government can prevent a rise in the price level, but only at the cost of a loss in total output (over the adjustment period) compared to case b).

20. Assume that for all periods real aggregate saving at normal (natural) GDP is 40 % of the respective natural levels of real GDP. In order to increase from one period to the next the normal level of real GDP by 1 unit, the capital stock (measured in GDP units) has to be increased by 4 units; the depreciation rate on the capital stock is 3 % per period. Under these circumstances, Harrod's warranted rate of growth is

- a) 3 %.
- b) 5 %.
- c) 7 %.

21. According to the neo-classical (Solow) model a discrepancy between the warranted and the natural growth rates is over time eliminated by an adjustment of

- a) the saving rate.
- b) the growth rate of effective labor input.
- c) the (incremental) capital-output ratio.

22. In an economy with a given saving rate, real GDP is growing at a steady-state growth rate g . The Solow model predicts that a permanently lower saving rate would result in

- a) a lower long-run growth rate of real GDP.
- b) an only temporarily lower growth rate of real GDP.
- c) an only temporarily higher real rental price of capital.

23. For an economy with a production function $Y = K^{1/3}N^{2/3}$, a saving rate of 0.2, a depreciation rate of 0.03, and a steady-state growth rate of 2 %, the steady-state capital intensity is

- a) smaller than 10.
- b) 10.
- c) bigger than 10.

24. For the economy of problem 23, the steady-state equilibrium is

- a) optimal in the sense of the Golden Rule.
- b) an under-accumulation equilibrium.
- c) an over-accumulation equilibrium.

25. Assume that the economy of problem 23 employs only male workers and has reached a steady-state equilibrium. By a courageous reform the discrimination of women is ended and the labor force quickly doubles. As a consequence of this, the Solow model predicts

- a) a doubling of real GDP in the long run.
- b) a permanent fall in the real wage per person.
- c) a temporary decline in the real capital rental.

26. From the event described in problem 25 the Solow model draws the further conclusion (for the economy of problem 23) that

- a) in the short run the real wage per person falls while the total wage bill rises.
- b) in the short run the real capital rental increases and the distribution of GDP changes in favour of capital owners.
- c) in the short run the total real wage bill stays unchanged.

27. Assume that the macroeconomic production function is of the type $Y = (K^\alpha + N^\alpha)^{1/\alpha}$ with $\alpha > 0$. In this case, the event described in problem 25 would in the short and medium run lead to

- a) a change in the distribution of GDP in favour of wage earners.
- b) a change in the distribution of GDP in favour of capital owners.
- c) no change in the distribution of GDP.

28. Assume that economic reforms make the institutional framework of an economy more effective which is reflected in a once-and-for-all increase in total factor productivity. If the elasticity of substitution between capital and labor is bigger than 1, the Solow model predicts that

- a) in the short run the distribution changes in favour of capitalists.
- b) in the long run the distribution changes in favour of capitalists.
- c) in the long run the distribution does not change at all.

29. Okun's law states that

- a) the fall in the unemployment rate from one period to the next is linearly related to the extent the actual growth rate of real GDP exceeds the growth rate of its natural level.
- b) the unemployment rate in the current period is negatively correlated with the real growth rate of GDP in the previous period.
- c) the fall in the unemployment rate from one period to the next is linearly related to the extent the actual inflation rate exceeds the expected inflation rate.

30. The current GDP of the European Union is roughly

- a) 500 billion euros.
- b) 2000 billion euros.
- c) 10 000 billion euros.

– End of text. Good luck! –