

Matr.-Nr. _____

Name: _____

Examination

5025: Economics II
(Intermediate Macroeconomics)

Semester:

Summer Semester 2008

Examiners:

Prof. Dr. Gerhard Schwödiauer/
Prof. Dr. Joachim Weimann

The following aids may be used:

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

Time:

120 minutes

This exam comprises 20 problems; all are to be answered. 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 10 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.

Good luck!

Examination Questions:

1. Consider a closed economy with a private marginal propensity to consume of 0.8 and a marginal tax rate of 50 %. The central bank succeeds in keeping the interest rates relevant for saving and investment plans constant. The government increases employment in the public sector thereby increasing its wage bill by 3 billion euros. If investment plans do not depend on current changes in GDP, and the government finances its additional expenditure by increasing its debt, aggregate effective demand (at constant prices) increases by

- a) 3 billion euros.
 b) 4 billion euros.
 c) 5 billion euros.

2. Assume that under the assumptions made in problem 1, the government keeps its deficit constant by cutting transfer payments. In this case, aggregate effective demand

- a) does not change.
 b) increases by 3 billion euros.
 c) increases by 4 billion euros.

3. Assume that real GDP is at its natural level when the consumers become more pessimistic about their future incomes. According to Keynesian theory,
- a) the interest rate falls sufficiently fast so that, in the short run, the balance of planned saving and investment is maintained at an unchanged level of GDP.
 - b) the balance of planned saving and investment is maintained by a short-run drop in real GDP.
 - c) the price level falls sufficiently fast so that, in the short run, aggregate demand is kept at its previous level.
4. The so-called “crowding-out” effect of an increase in government expenditure on private investment is the bigger
- a) the bigger is the marginal tax rate on personal incomes.
 - b) the smaller is the interest sensitivity of money demand.
 - c) the smaller is the income sensitivity of money demand.
5. Assume that an economy is in its natural (medium-run) equilibrium position when economic reforms take effect which significantly reduce the producers’ price-setting power. As a consequence, if the aggregate demand curve does not change, the price level
- a) falls in the short run while real GDP remains unchanged.
 - b) falls in the short run accompanied by a rise in output but returns to its previous level in the medium run.
 - c) falls in the long run by more than in the short run.
6. The government decides to increase the budget deficit for the current fiscal year by 10 billion euros. It considers three options: (A) raising government consumption by 10 billion, (B) raising social spending by 10 billion, (C) raising government investment 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 increase in effective demand if (C) is chosen is bigger than if (A) is chosen.
 - c) For effective demand it does not matter whether the government opts for (B) or (C).
7. Assume that for a constant private *m_{ps}* (marginal propensity to save), 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 higher the tax rate *t* is.
 - b) the smaller the higher the tax rate *t* is.
 - c) independent of the size of *t*.

8. Assume that an economy is in a natural equilibrium position with an inflation rate of zero. Assume further that, whatever happens, the economic agents do not change their inflation expectations. If the government increases its real consumption to a permanently higher level (relative to the constant natural level of GDP) and the central bank keeps its nominal money supply unchanged.

- a) the inflation rate will not change.
- b) the inflation rate will temporarily increase, but in the medium run the price level will return to its original level.
- c) the inflation rate will temporarily increase and in the medium run return to zero, but at a permanently higher price level.

9. 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.

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

- a) is dampened by a high interest elasticity of money demand.
- b) is dampened by a low 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. Assume that aggregate money demand is explained by the Baumol-Tobin model (so that each individual's real balances are at an unconstrained optimum). Then the velocity of money (in the sense of the so-called quantity equation).

- a) is an increasing function of aggregate real income with an elasticity of $\frac{1}{2}$.
- b) is a falling function of aggregate real income with an elasticity of $\frac{1}{2}$.
- c) does not depend on aggregate real income.

13. Suppose that all firms produce according to the production function $Y = K^{1/3}N^{2/3}$ and are price takers both in output and labor markets.

Assume further that the current wage rate is fixed at $W=P^e$, where P^e is the price level expected for the current period. The corresponding Phillips Curve

$$\pi = \pi^e - b(u - u_n)$$

has a slope

- a) $b = 2/3$.
- b) $b = 3$.
- c) $b = 1/3$.

14. A medium-run equilibrium is disturbed by a permanent increase of money supply by 20 %. Without any further government action

- a) the price level rises immediately by 20 % without any change 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 level) than before the monetary expansion.

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 for all periods real aggregate saving at normal (natural) GDP is 30 % 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 5 units; the depreciation rate on the capital stock is 3 % per period. Under these circumstances, Harrod's warranted rate of growth is

- a) 2 %.
- b) 3 %.
- c) 4 %.

17. For an economy with a production function $Y = K^{1/2}N^{1/2}$, a saving rate of 0.5, a depreciation rate of 0.03, and a steady-state growth rate of 2 %, the steady-state capital intensity is

- a) smaller than 30.
- b) 30.
- c) bigger than 30.

18. For the economy of problem 17, the steady-state equilibrium is

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

19. Assume that the economy of problem 17 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.

20. 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 19 would in the short and medium run lead, in comparison to the original equilibrium, 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.

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