Matr.-Nr. _____   Name: _____

Examination	**Economics II/Intermediate Macroeconomics (No. 5025)**
Semester:	**Summer Semester 2006**
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 30 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 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!

Good luck!

Examination Questions:

1. Assume that current output prices exceed the price level at the time when the nominal wage contracts were concluded by more than the inflation rate then expected, while all other relevant circumstances conform to expectations. In this case, current employment

   ☐ a) is below its natural level.
   ☐ b) is at its natural level.
   ☐ c) is above its natural level.

2. Assume that real GDP is at its natural level when the producers become more optimistic about their future profits. According to Keynesian theory,

   ☐ a) the interest rate rises 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 rise in real GDP.
   ☐ c) the price level rises sufficiently fast so that, in the short run, aggregate demand is kept at its previous level.

3. 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.

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

   ☐ a) The fall in effective demand (in the current year) is bigger if (A) instead of (B) is taken.
   ☐ b) The fall 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).

5. Private households become more optimistic about their future incomes and, consequently, reduce their autonomous saving. 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 falls.
   ☐ b) Effective demand remains unchanged.
   ☐ c) Aggregate private consumption rises.

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 0.1. The private households' marginal propensity to save (*mps*) is 0.8; the marginal tax rate for private households is 0.5. If the government increases social transfers to households by 10 billion, aggregate effective demand increases by

   ☐ a) more than 5 billion.
   ☐ b) 5 billion.
   ☐ c) less than 5 billion.

8. Consider the *IS*-curve of the economy characterized in problem 7. A rise in 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)   is a rising function of real income.
   ☐ b)   is a falling function of 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

   ☐ 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. The central bank increases the supply of base money by 100 billion. If the non-banking public holds currency and bank deposits in a proportion of 1 to 5, and the banks keep 10 % of their deposits as reserves, then the money supply will increase by

   ☐ a)   200 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

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

13. When the economy is caught in a liquidity trap and aggregate consumption depends positively on real balances, 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. If for an expectations-augmented Phillips curve inflation expectations are "static" then a permanent reduction of the unemployment rate below its natural level results in

    ☐   a)   a permanently higher constant inflation rate.

    ☐   b)   an inflation rate which grows at a constant positive rate.

    ☐   c)   an inflation rate which grows at a positive but declining 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 expected real wage is given by $1-u$, where u is the current rate of unemployment. Then the natural rate of unemployment is close to

    ☐   a)   5 %.

    ☐   b)   8 %.

    ☐   c)   10 %.

17. Assume that in the model of problem 16 part of total employment is fixed in the short run. This implies a short-run *AS*-curve with a price elasticity of output

    ☐   a)   less than 1.

    ☐   b)   equal to 1.

    ☐   c)   higher than 1.

18. A medium-run equilibrium is disturbed by a permanent contraction of money supply by 10 %. As a consequence, people believe that in the future the long-run inflation rate will be lower than before. Without any further government action (and assuming the absence of wealth effects)

    ☐   a)   the price level falls immediately by 10 % without any change in output and interest rate.

    ☐   b)   the price level falls in the medium run by 10 % while real GDP and real interest rates return to their previous (natural) levels.

    ☐   c)   the price level falls in the medium run by more than 10 % (with, nevertheless, real GDP and real interest rates back at their unchanged natural levels).

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

☐ 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 lower medium-run equilibrium real GDP than in case b).

20. 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 %.

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 higher total factor productivity would result in

☐ a) a higher long-run growth rate of real GDP.
☐ b) an only temporarily higher growth rate of real GDP.
☐ c) an only temporarily higher real wage rate.

23. For an economy with a production function $Y = K^{\frac{1}{3}}N^{\frac{2}{3}}$, 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 100.
☐ b) 100.
☐ c) bigger than 100.

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, 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.

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 smaller than 1, the Solow model predicts that

☐ a) in the short run the distribution changes in favour of workers.
☐ b) in the long run the distribution changes in favour of workers.
☐ 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 Germany is roughly

☐ a) 1000 billion euros.
☐ b) 2500 billion euros.
☐ c) 5000 billion euros.

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