Matr.-Nr. _____   Name: _____

Examination	**Economics II/Intermediate Macroeconomics (No. 5025)**
Semester:	**Winter Semester 2005/06**
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 for a price level P_o, which was expected when the nominal wage contracts were concluded, aggregate supply Y_o equals aggregate demand. This implies that employment

   ☐ a)   is at its natural level.
   ☐ b)   is at its full-employment level.
   ☐ c)   can in the short run not be increased by monetary policy.

2. Assume that in the economy described in problem 1 producers become more pessimistic about their future profits. According to Keynesian theory,

   ☐ a)   the interest rate falls sufficiently so that, in the short run, the balance of planned saving and investment is maintained at an unchanged level of GDP.
   ☐ b)   the price level falls sufficiently so that, in the short run, aggregate demand is kept at its previous level Y_o.
   ☐ c)   the balance of planned saving and investment is maintained by a short-run fall in real GDP.

3. Assume that for the economy described in problem 1 the firms' monopolistic power increases while all other conditions remain unchanged. As a consequence,

- [ ] a) the price level rises in the short run while real GDP remains unchanged.
- [ ] b) the price level rises and real GDP falls in the short run.
- [ ] c) in the medium run the price level stays unchanged while real GDP falls by more than in the short run.

4. 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).

5. Private households become more pessimistic about their future incomes and, consequently, increase 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 wrong?

- [ ] a) Aggregate saving rises.
- [ ] b) Effective demand changes.
- [ ] c) Aggregate private consumption falls.

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 higher the tax rate t is.
- [ ] b) the smaller the higher 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 is 0.5. If the government increases social transfers to households by 30 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) is a rising function of the interest rate.
   - [ ] b) is a falling function of the interest rate.
   - [ ] c) does not depend on the interest rate.

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

    - [ ] a) is larger for a higher interest elasticity of bank reserves.
    - [ ] b) is larger 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. 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 25 %. The expected real wage is given by 1-*u*, where *u* is the current rate of unemployment. Then the natural rate of unemployment is

    ☐ a) 15 %.

    ☐ b) 20 %.

    ☐ c) 25 %.

17. The model of problem 16 implies an *AS*-curve with a price elasticity of real GDP

    ☐ a) less than 1.

    ☐ b) equal to 1.

    ☐ c) higher than 1.

18. 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.

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

    ☐ a) Without any change in fiscal and monetary policy, the price level falls in the short run in proportion to the decline in the mark-up, without a change in real GDP.

    ☐ b) Without any change in fiscal and monetary policy, real GDP rises in the medium run while the price level falls by more than in the short run.

    ☐ c) By a restrictive monetary or fiscal policy the government can prevent a fall 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 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) a temporarily lower real rental price of capital.

23. For an economy with a production function $Y = K^{\frac{1}{2}}N^{\frac{1}{2}}$, 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.

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 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 USA is roughly

☐ a) 6000 billion dollars.
☐ b) 12000 billion dollars.
☐ c) 24000 billion dollars.

– End of text –