UNIVERSITY OF CALIFORNIA, LOS ANGELES
DEPARTMENT OF ECONOMICS
COMPREHENSIVE EXAMINATION -- DEVELOPMENT ECONOMICS
JULY 2002

MAXIMUM SCORE: 240 PTS. TIME: 4 HOURS

I. (35 Pts.) Indicate whether you consider each of the following statements to be TRUE, FALSE, or UNCERTAIN. In each case give a brief explanation of your answer. Your grade will depend heavily on your explanation.

1. When irrigation rights are divided equally among the eligible hectares, the benefits from expanding the area served by a given irrigation dam would be measured by $(AP_W\text{-}MP_W)T_W$.
   Here: AP_W = Average product of water
   MP_W = Marginal product of water
   T_W = Amount of water diverted from pre-existing area served by the irrigation dam, in order to supply the newly added hectares.

2. The unionization of a firm that was previously non-unionized will cause the social opportunity cost of labor to fall for uses that require labor that is obtainable at the free-market wage.

3. When there is a situation of migration-fed unemployment, the social opportunity cost of labor (in the cities to which migration occurs) will be higher if the migrants put a relatively high value on their leisure (i.e., non-work) time than it will be if they put a low or zero value on such time.

4. When there is a hierarchy of protected-sector wage rates ($W_{p1} > W_{p2} > W_{p3}$, etc.), for a given class of labor, then the introduction of a new demand for labor (say, by the installation of a new plant by a multinational firm) will cause the social opportunity cost of labor to rise in all protected sectors, but it will rise by a smaller percentage for labor hired at W_{p1} than labor hired at W_{p2}.

5. If a country has a uniform tariff on all imports at the rate of T, a project which induces an increase of 100 in that country's exports will give rise to an external benefit equal to 100T.

6. For projects that produce a perpetual constant flow of benefits, and which have their capital costs concentrated in one single year (immediately preceding the start of the benefit flow), one gets the same results if one uses: a) the marginal rate of time preference (r) or, b) the weighted average social opportunity cost of capital (ω_S) in discounting benefits to evaluate the project. (Assume there is only one marginal rate of time preference, and that when it is used the appropriate auxiliary procedures are also followed.)

II. (25 Pts.) The IMF has been heavily criticized for endorsing a policy of high interest rates to defend weakening currencies. In this light:

1. Discuss the rationale behind such a policy recommendation.
2. Discuss the costs that may arise.
3. Compare this policy to alternative ones (such as foreign exchange market intervention).

III. (20 Pts.) "Zero marginal product of labor is neither a necessary nor sufficient condition for the existence of surplus labor." Discuss.

IV. (20 Pts.) Consider a country, for simplicity, with a total output y that is constant over time. Assume that the monetary authorities of this country followed a policy of zero increase in the quantity of money, up to a point in time, t^*. Then, starting in t^*, and without making any special announcements or declarations, they move, perhaps impelled by the need to finance a fiscal deficit, into a policy of increasing the money supply by 2% per month. Draw time paths showing how you think the following variables would behave, in the approach to a new equilibrium.

a. P, the general price level.
b. M/P, real cash balances.
c. $\Delta P/P$, the monthly rate of inflation.

Also answer the following questions

1. Is it necessary that somewhere in the process of adjustment the rate of inflation should overshoot its final equilibrium level?

2. Is it necessary that somewhere in the process of adjustment the level of real cash balances should overshoot both its initial and its final equilibrium levels?
   In answering this question assume you are dealing with a real world situation, i.e., your answer should describe what you think really would happen if this case were generated by some lucky "natural experiment". Also in your answer, assume that the country maintains a flexible exchange rate policy at all points in time.

V. (20 Pts.) Explain:

1. the difference between extensive and intensive growth, and

2. why limits on carbon emissions to moderate global warming would damage the growth prospects of developing countries.

VI. (30 Pts.) The standard Mundell-Fleming model tells us that a devaluation should be expansionary. Most economists, however, would now argue that a devaluation in a developing economy is likely to be contractionary. Why? What is the Mundell-Fleming model "missing"? How would you "modify" this model to account for the possibility of a "contractionary" devaluation?

VII. (30 Pts.) Outline the causes of and the lessons to be drawn from the recent East Asian crises.

VIII. (25 Pts.) Recent evidence suggests that currency crises and banking crises tend to occur together. In this light:

1. Discuss the relevant evidence.

2. Discuss the causality (if any) between these two crises. Which causes which? Or are they caused by third factors?

3. What policy recommendations would you draw from your discussion?

IX. (10 Pts.) "Ramsey taxes would be the preferred form of taxation of a predatory state." Discuss.

X. (25 Pts.) Write an essay on the timing of investment projects. In it be sure to state:

1. the general principle of investment analysis which should guide decisions with respect to timing.
2. how that principle should be applied in the analysis of alternative starting dates for a project.
3. the rule governing the special case where the benefits accruing at time t, (B_t) are an increasing function of time, independent of t^*+1, the date of initiation of benefit flows from the project (with the obvious proviso that B_t is zero until the project is put in operation). Assume here a 1-year construction period and a construction cost of K_{t^*} that does not vary with t^* (the period in which construction takes place).
4. how the above rule leads to the application of the concept of a "critical traffic volume" for highway improvement projects.
5. how the above rule should be adjusted if K_{t^*} is not constant and if B_t is not a forever increasing function of time.