UNIVERSITY OF DUBLIN
TRINITY COLLEGE

FACULTY OF ARTS, HUMANITIES AND SOCIAL SCIENCES

DEPARTMENT OF ECONOMICS

Junior Freshman   **Hillary Term 2010**
BESS, TSM, BSL, MSISS,
Sociology and Social Policy

Introduction to Economics

1st March 2010   **Sports Centre**   **14.00-15.30**

Dr Paul Scanlon

Answer **ALL** multiple choice questions in Section A; for each question, indicate the most reasonable answer. Section A carries **42 marks** (3 marks per question.)
Answer **BOTH** Questions in Section B. Each question in **Section B** carries **29 MARKS**.

Write in the answers to Section A on **both** this exam paper (where you circle the correct answer) and on the special MCQ form. You must submit both.
Enter your **8-digit student ID** in the space provided on the MCQ form.

NAME_____

Student ID_____

Have you previously studied Economics (e.g., Leaving Cert, A Level)?_____

Materials Permitted for this Examination
Non-programmable calculator;
Graph Paper

You may not start this examination until you are instructed to do so by the Invigilator.

Section A

1. Between 1980 and 2007, *real GDP per capita* in the Irish economy grew at an average rate of 4 percent a year. At this rate, in Ireland:

    A) The level of capital doubles approximately every 18 years
    B) The CPI doubles every 4 years
    C) Nominal GDP doubles every 4 years
    D) Real GDP per capita doubles approximately every 18 years
    E) The CPI will eventually stop rising

2. If the current account deficit is 50, then *international savings* in the economy are:

    A) -50
    B) 50
    C) Equal to the value of imports
    D) Indeterminate
    E) Equal to the value of exports

3. According to the Solow model, the best way to increase the *standard of living* in a developed economy such as Ireland would be to:

    A) Encourage research and development
    B) Raise the minimum wage
    C) Create incentives to raise the savings rate
    D) Design policies to reduce the depreciation of capital
    E) Encourage the government to run budget surpluses

4. According to the concept of *conditional convergence*:

    A) Poor countries grow faster than rich countries
    B) Poor countries grow slower than rich countries
    C) A poor country that has the same steady state as a rich country will have a higher growth rate of GDP than the rich country
    D) Poor countries will remain poor
    E) Poor countries grow fast initially, but eventually slow down.

5. According to the *efficient markets hypothesis*, if a firm's expected future profits suddenly fall, then:

    A) Its stock price will fall in the future
    B) Its stock price will rise in the future
    C) The risk premium on bonds issued by the firm will fall today
    D) Its stock price will fall today
    E) Its stock price will rise today

6. If the nominal interest rate is 1 percent, while the rate of inflation is 5 percent, then the *real* interest rate is:

    A) 6 percent
    B) 5 percent
    C) 4 percent
    D) -4 percent
    E) 1 percent

7. If real GDP stays the same, while total factor productivity and the capital stock have fallen, then *growth accounting* would show:

    A) The number of people working has risen
    B) The ratio of nominal GDP to real GDP rose
    C) GNP rose
    D) The CPI rose
    E) Inventory investment rose

8. According to New Growth Theory:

    A) Monopoly power creates inefficiencies and thus slows economic development
    B) A larger population will cause a "Malthusian trap"
    C) The productivity slowdown was caused by oil price increases
    D) Greater monopoly power can raise an economy's growth rate
    E) Capital accumulation is the key to rising living standards.

9. All of the following can lead to a high equilibrium nominal interest rate in an economy EXCEPT:

    A) Higher budget deficits
    B) A high liquidity premium
    C) A high risk premium
    D) A low rate of expected inflation
    E) A low level of capital inflows

10. Suppose there are two economies, X and Y, where the depreciation rates and levels of total factor productivity are the same, but where X has a *higher* savings rate. If both economies are below steady state, then:

    A) Real GDP per capita in X will grow faster than in Y
    B) Real GDP per capita in Y will grow faster than in X
    C) Real GDP per capita in X and Y will grow at the same rate
    D) It is impossible to say where real GDP per capita will grow faster
    E) X has a higher standard of living

11. Suppose nominal GDP in an economy doubles, but real GDP stays the same. Then the economy experienced:

    A) Deflation
    B) Inflation
    C) Disinflation
    D) A fall in the CPI
    E) Hyperinflation

12. An Irish firm setting up a branch in Britain will:

    A) Raise Irish GNP and British GDP
    B) Raise Irish GDP and British GDP
    C) Raise Irish GNP and British GNP
    D) Lower Irish GNP and raise British GDP
    E) Lower Irish GNP and British GNP

13. When the interest rate rises, bond prices:

    A) fall
    B) rise
    C) may either rise or fall
    D) stay the same
    E) become permanently more volatile (by the efficient market hypothesis)

14. Which combination leads to the highest equilibrium level of real interest rates?

    A) a high level of savings and a low level of investment demand
    B) a low level of savings and a high level of investment demand
    C) a high level of savings and a high level of investment demand
    D) a low level of savings and a low level of investment demand
    E) a high population and a high level of the CPI

Section B

2.

a)

  i)   Suppose an economy is in steady state, where people save a fraction *s* of their income. Then people decide to save <u>all</u> of their income. Using a Solow diagram, illustrate this change graphically.

  ii)   Relative to the old steady state, explain how each of the following variables change when the economy is at the new steady state:

    1)   The level of real GDP
    2)   The growth rate of the standard of living
    3)   The level of consumption

b)
  i)   Write down the capital accumulation equation, and use it to give an expression for an economy's *capital intensity*, $\dfrac{K}{Y}$, in steady state.

  ii)   Figure 1 is a graph of capital intensity against the *investment rate,* $\dfrac{I}{Y}$,for various economies in 2000. Use your answer from b.i) above to explain whether the graph offers broad empirical support for the Solow model. (*Assume all economies are in steady state and have the same depreciation rate.*)

3.

  a)   *Suppose people in an economy expect a future fall in the growth rate of of their incomes. Investment demand in the economy also falls.*

    i)   According to the *permanent income hypothesis*, what implications would this change have for peoples' savings level today?

    ii)   Using the *loanable funds theory*, illustrate graphically and explain clearly how the *real interest rate* changes after the developments noted above. If savings in the economy were more responsive to changes in interest rates, how would your answer change? Explain.

  b)   Figure 2 shows the money supply in the United States from 1958 to 2010, and illustrates how it increased approximately tenfold.

    i)   According to the *quantity theory of money*, did the U.S. economy experience inflation over this period? Explain.
    ii)   According to the *equation of exchange*, if money velocity was constant over this period, what happened to *nominal GDP* over this period? Explain.
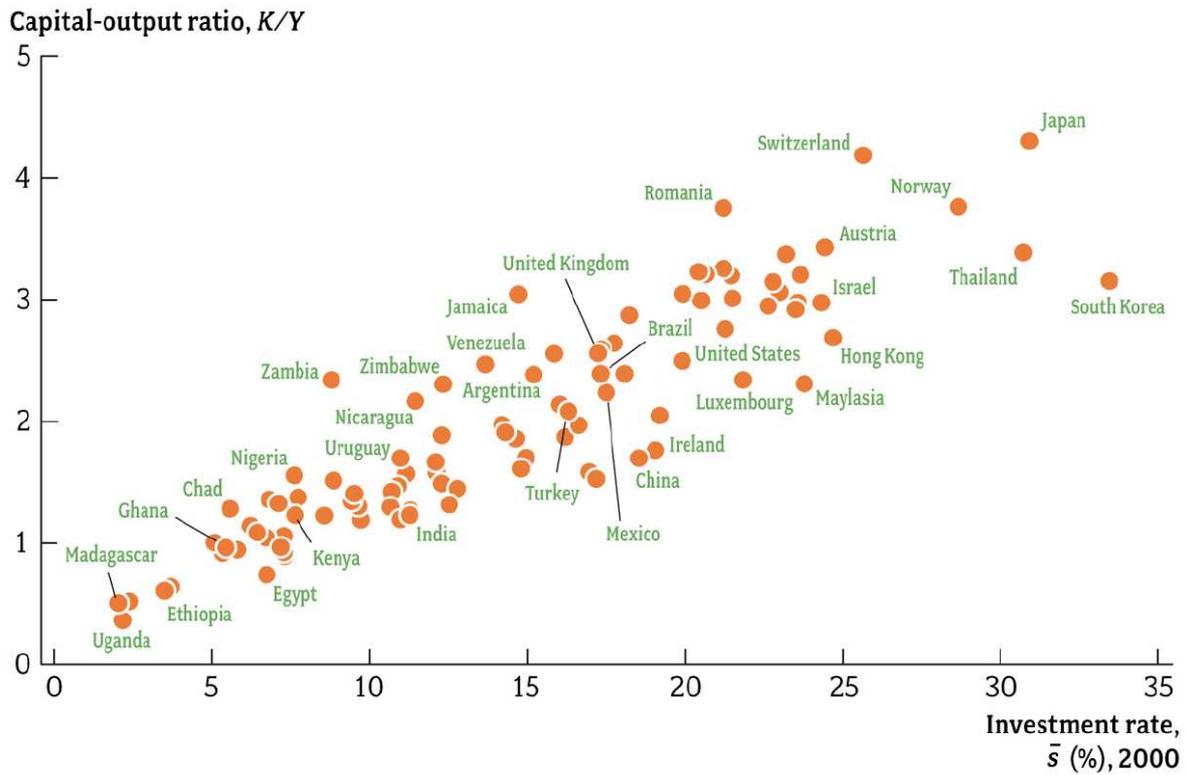
FIGURE 1

Capital-output ratio, K/Y

Investment rate, $\bar{s}$ (%), 2000

FIGURE 2