Examination Period 2: 2017/18

Module Title: Advanced Macroeconomics
Level: Seven
Time Allowed: Three hours

Instructions to students:
- Enter your student number not your name on all answer books.
- Answer four out of five questions.
- All questions are equally weighted.
- Use a separate answer book for each question attempted.
- You will be rewarded for using graphs, where applicable.
- The use of a non-programmable calculator is permitted.

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Answer **four** out of **five** questions.

1. Consider a Ramsey-Cass-Koopmans economy that is on its balanced growth path, and suppose there is a permanent fall in $g$ (Variables definition: $g =$ growth rate of knowledge/effectiveness of labour/technology; $k =$ capital per unit of effective labour; $c =$ consumption per effective labour):
   
   a. How, if at all, does this affect the $k=0$ curve?  
      (5 marks)
   
   b. How, if at all, does this affect the $c=0$ curve?  
      (5 marks)
   
   c. What happens to $c$ at the time of the change?  
      (5 marks)
   
   d. Find an expression for the impact of a marginal change in $g$ on the fraction of output that is saved on the balanced growth path. Can one tell whether this expression is positive or negative?  
      (10 marks)
      
      **(Total: 25 marks)**

2. Reflecting on the impact of fiscal and monetary policies on GDP, in what ways, if any, are developing countries different from advanced countries? (Hint: you may choose any advanced country and a developing country as point of reference/s.)  
   (25 marks)

3. Assuming that an economy starts out in long-run equilibrium in period 0, use the AS-AD model with static expectations to undertake an analysis of the effects of a positive shock (a fall in $s$) which occurs in period 1 and lasts for only one period. (Hint: explain the short-run effect as well as the economy’s adjustment over time.)  
   (25 marks)
4. Describe how, if at all, each of the following developments affects the breakeven and actual investment lines in our basic diagram for the Solow model:

a. The rate of depreciation falls.  
   (6 marks)

b. The rate of technological progress rises.  
   (6 marks)

c. The production function is a Cobb-Douglas, \( f(k) = k^\alpha \), and capital’s share, \( \alpha \), rises.  
   (7 marks)

d. Workers exert more effort, so that output per unit of effective labour for a given value of capital per unit of effective labour is higher than before.  
   (6 marks)

(Total: 25 marks)

5. 

a. Present a critical discussion of the classical time inconsistency problem, as well as the solution.  
   (15 marks)

b. Using the role played by the Bank of England during the Brexit debate as a reference point, discuss the extent to which central banks are independent today.  
   (10 marks)

(Total: 25 marks)