

SCHOOL OF ECONOMICS
FACULTY OF ARTS AND SOCIAL SCIENCES

ECON 5002 Macroeconomic Theory

Practice Questions for the Final Exam

Some points to note about the final exam:

- You will have 2 hours to complete the exam.
- The real exam will consist of two sections: Section A comprises 20 multiple-choice questions, worth 40 marks. Section B contains 3 short-answer questions or problems, worth 60 marks.
- Bring a pencil for the multiple-choice questions and a pen for the written answers.
- You may bring a non-programmable calculator (exam invigilators will check).
- Exam questions are drawn from the entire course, including the lectures, textbook, and tutorials (70% of the exam will be based on the post midterm material).
- Primary focus will be on models, concepts, and theories emphasized in lectures and/or covered in tutorial questions.
- Keep your written answers brief and write neatly. Extraneous answers will be penalized and answers that are difficult to read will be deemed to be incorrect.

Caveat:

We only include 10 MCQs in this practice paper.

- Answers to the sample exam paper will NOT be available.
- This practice exam is just to indicate the style of the exam, and to provide extra practice questions beyond tutorial problems.
- The actual exam questions can be quite different and may bear no resemblance.

SECTION A: Example Multiple Choice Questions

1. The chain-weighted measure of real GDP uses prices from:
 - (a) a constant base year.
 - (b) a constantly changing base year.
 - (c) a base year that changes every five years.
 - (d) a base year that changes every ten years.
 - (e) none of the above

2. If the production function is given by $Y_t = \bar{A}K_t^{1/3}L_t^{2/3}$, the savings rate, s , is 20 percent, the depreciation rate, $\bar{d}$, is 5 percent, and $\bar{A} = \bar{L} = 1$, the steady-state level of output in the Solow model is:
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4
 - (e) 8

3. Potential output is best defined as:
 - (a) the amount of total output produces if all inputs are utilized at their long-run, sustainable levels
 - (b) what an economy can produce when it is at maximum capacity
 - (c) the current level of output
 - (d) the level of output when inflation is zero
 - (e) none of the above

4. Suppose that the central bank raises its target interest rate. This implies that
 - (a) short-run output will rise as the economy moves along the IS curve
 - (b) short-run output will fall as the economy moves along the IS curve
 - (c) short-run output will fall as the IS curve shifts to the left
 - (d) short-run output will rise as the IS curve shifts to the right
 - (e) there will be no change in short-run output

5. If the current capital stock in South Korea is greater than the current capital stock in China, according to the principle of transition dynamics,
 - (a) China initially will grow faster than South Korea, but each will have the same steady state.
 - (b) China initially will grow slower than South Korea, but each will have the same steady state.
 - (c) China initially will grow faster than South Korea and will have a higher steady state.
 - (d) China initially will grow faster than South Korea and will have a lower steady state.
 - (e) Both South Korea and China initially will grow at the same rate and have the same steady state.

6. In growth accounting, the residual, $\bar{A}$, is so named because:
 - (a) the economy is complicated.
 - (b) economists know exactly what contributes to growth.
 - (c) it is a way to measure *observed* TFP growth.
 - (d) it is a way to measure *unobserved* TFP growth.
 - (e) it measures labor composition.

7. If the central bank targets the interest rate, the:
 - (a) money demand curve is flat.
 - (b) money supply curve is vertical.
 - (c) money supply curve slopes upward.

- (d) money supply curve is flat.
- (e) money demand curve is vertical.

8. If inflation is higher in the United States than in the United Kingdom, given the law of one price

- (a) the dollar (nominal) should appreciate to the pound.
- (b) the dollar (nominal) should depreciate to the pound.
- (c) real interest rates should be higher in the United States than in the United Kingdom.
- (d) the U.S. net exports to the United Kingdom should fall.
- (e) pounds will flow to the United States from the United Kingdom.

9. Assume that the current exchange rate between the Australian dollar and the U.K. pound is 0.5 ($E = 0.5$). If interest parity holds, and the Australian interest rate is 6% while the U.K. interest rate is 8%, the expected exchange rate in one year is_____.

- (a) 0.40
- (b) b. 0.48
- (c) 0.49
- (d) d. 0.51
- (e) e. 0.52

10. If the real exchange rate for the Australian dollar against the United States dollar depreciates in a given year by 1% while the inflation rate in the United States is 4% per annum and that in Australia is 5% per annum, the nominal value of the Australian dollar over that year will have,

- (a) appreciated by 2% against the US dollar
- (b) appreciated by 8% against the US dollar
- (c) depreciated by 2% against the US dollar
- (d) depreciated by 8% against the US dollar

SECTION B: Example Short Answer Questions.

11. Solow Growth Model. Consider the production function

$$Y = K^{1/2}(AN)^{1/2}$$

Assume that the savings rate s equals 30% and the depreciation rate δ equals 5%.

Further, assume the growth rate of the labor force g_N is 4% and the growth rate of technological progress g_A is 3% per year. Find the steady-state values of (i) capital per effective worker, (ii) output per effective worker, (iii) the growth rate of output per effective worker, (iv) the growth rate of output per worker, and (v) the growth rate of output. (3 marks)

Calculate the savings rate s^* that maximizes steady state consumption per effective worker. What is the maximum consumption per effective worker? (3 marks)

12. Consider the following statement "The strong growth in China over the last two decades or so was mainly due to utilization of labour and capital inputs and a higher saving rate, rather than continuing technological progress, and hence the high growth era will come to an end sooner or later". Evaluate this statement using the growth models (e.g. Solow-Swan model) studied in this course and discuss the secrets of long-run economic growth.

13. Use the open-economy ISLM/IP model (the Mundell-Fleming) model to answer all of the following parts a) and b).

- (a) Examine the impact of a major recession in, say, China on a small, commodity-exporting country like Australia. Note that China is a major buyer of Australian commodities.
- (b) In what ways does a floating exchange rate insulate the domestic economy from such external real shocks in (a) above? Explain.

14. "The Japanese central bank should simply increase the growth rate of nominal money to get the economy out of its long slump." In discussing this statement, explain using the ISLM model what would happen when the nominal interest rate reaches zero.

15. Explain how a disinflationary monetary policy can successfully reduce the inflation rate to a permanently lower level. Use the AD-AS model (in terms of inflation and output) to describe the initial policy actions, a short run equilibrium, adjustment process toward a new medium run equilibrium. Does the way expectations formed by the general public matter? If so, how?