Endterm Examination

IFMR GSB, Krea University (Batch: 2019-21)
Macroeconomics (Course Code: **ECON502**)
04 December 2019

Maximum Points: 60 **Duration**: 150 minutes

Instructions and Advice:

- This exam accounts for 30% of your final grades.
- The question paper is divided in two sections- Part A and Part B.
- You need to answer 6 questions in all. [3 from Part A, and 3 from Part B]
- You can choose between Question 1 and Question 2, between Question 3 and Question 4, between Question 5 and Question 6.
- In case you choose to answer Question 1 as well as Question 2 (by accident or by design) in the exam, the first question that you attempt will be evaluated. Same goes for Questions 3 and 4 (and for Questions 5 and 6).
- All other questions are compulsory.
- Please be brief and precise in your answers. Unnecessarily lengthy answers will attract penalty.
- Label all graphs and figures clearly.
- At no point of this examination you are allowed to ask clarificatory questions. Make reasonable assumption if you have doubts and proceed to answer the question.
- You are **allowed** to use a non-scientific calculator in the exam.
- There is plenty of time. Use it wisely, do not rush.
- All the best! **:)**

Part A

1. (4 points) *Label each of the following statements true, false, or uncertain. Explain briefly. [NOTE: There are no points for answers without explanation.]*
   (a) (2 points) If inflation turns out to be higher than expected, the realized real cost of borrowing turns out to be lower than the real interest rate.
   (b) (2 points) A monetary expansion will lead to an upward sloping yield curve.

   Or

2. (4 points) *For each of the changes in expectations in (a) and (b), determine whether there is a shift in the IS curve, the LM curve, both curves, or neither. In each case, assume that expected current and future inflation are equal to zero and that no other exogenous variable is changing.*
   (a) (2 points) an increase in the expected future real interest rate.
   (b) (2 points) a decline in the current money supply.

3. (5 points) Suppose that there is a fall in foreign output. Show the impact on the domestic economy using a graph. What is the effect on domestic output? On domestic net exports?

   OR

4. (5 points) If domestic inflation is higher than foreign inflation, what happens to the real exchange rate over time? What happens to the trade balance over time? Explain in words.

5. (6 points) *Consider two economies, one called La La Land, and the other called Wonderland. Construct the balance of payments for each country.*
   (a) (2 points) La La Land purchased ₹100 in oil from the Wonderland.
   (b) (2 points) Wonderland investors were paid ₹15 in dividends from their holdings of the La La Land equities.
   (c) (2 points) Wonderland investors purchased ₹15 of La La Land government bonds.

   Or

6. (6 points) *It is an election year, and the economy is in a recession. The opposition candidate campaigns on a platform of passing a tax-rate break, which would be effective next year after she takes office. What impact does this campaign promise have on the following variables: Y'^{e}, r'^{e}, T'^{e} under the following scenarios.*
   (a) (3 points) The central bank will act to prevent any change in future output.
   (b) (3 points) The central bank will act to prevent any change in the future interest rate.

Part B

7. (10 points) *Consider an economy that suffers a fall in business confidence (which tends to reduce investment).*
   (a) (5 points) Suppose the economy has a flexible exchange rate. In an IS-LM-UIP[1] diagram, show the short-run effect of the fall in business confidence on output, the interest rate, and the exchange rate. How does the change in the exchange rate, by itself, tend to affect output? Does the change in the exchange rate dampen (make smaller) or amplify (make larger) the effect of the fall in business confidence on output?
   (b) (5 points) Suppose instead the economy has a fixed exchange rate. In an IS-LM-UIP diagram, show how the economy responds to the fall in business confidence. What must happen to the money supply in order to maintain the fixed exchange rate? How does the effect on output in this economy, with fixed exchange rates, compare to the effect you found for the economy in part (a), with flexible exchange rates?

8. (15 points) *Consider an open economy characterized by the equations below.*

$$\begin{aligned} C &= c_0 + c_1 \cdot (Y - T) \\ I &= b_0 + b_1 \cdot (Y) \\ IM &= m \cdot Y \\ X &= x \cdot Y^* \end{aligned}$$

   Assumptions: a. the real exchange rate is fixed at a value of 1, b. foreign income (Y^*) is fixed, and c. taxes are fixed and the government expenditure is also exogenous.
   (a) (5 points) Write the equilibrium condition in the market for domestic goods and solve for Y.
   (b) (5 points) Suppose government purchases fall by one unit. What is the impact on the output? What assumptions do you need on m, c_1, and b_1?
   (c) (5 points) How do net exports change when government purchases fall by one unit?

9. (20 points) *A consumer has nonhuman wealth equal to ₹100. She earns ₹40 this year and expects her salary to increase by 5% in real terms each year for the following two years. She will then retire. The real interest rate is equal to 0% and is expected to remain at 0% in the future. Labour income is taxed at a rate of 25%.*
   (a) (5 points) What is this consumer's human wealth?
   (b) (5 points) What is her total wealth?
   (c) (5 points) If she expects to live for seven more years after retiring, and wants her consumption to remain the same (in real terms) every year from now on, how much can she consume this year?
   (d) (5 points) If she received a bonus of ₹20 in the current year only, with all future salary payments remaining as stated earlier, by how much could this consumer increase consumption now and in the future?

[1] UIP stands for the uncovered interest parity condition