Endterm Practice Exam
Macro Economics

Institute for Financial Management & Research (Batch: 2018-20)

13 December, 2018

Maximum Points: 80 **Duration**: 150 minutes

Instructions and Advice:

- This exam accounts for 40% of your final grades.
- The question paper is divided in two sections- Part A and Part B.
- You need to answer 5 questions in all. [2 from Part A, and 3 from Part B]
- You can choose between Question 1 and Question 2, and between Question 3 and Question 4.
- 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.
- 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 non-scientific calculator in the exam.
- There is plenty of time. Use it wisely, do not rush.
- All the best! **:)**

Part A

1. (10 points) Using the information in this chapter, label each of the following statements true, false, or uncertain. Explain briefly.
   (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) Long-term interest rates typically move more than short-term interest rates.
   (c) (3 points) Economists have found that the effect of current profit on investment can be fully explained by the effect of current profit on expectations of future profits.
   (d) (3 points) The introduction of expectations in the goods market model makes the IS curve flatter, although it is still downward sloping.

   Or

2. (10 points) Use the $IS - LM$ model to determine the impact on stock prices of each of the given policy changes.
   (a) (5 points) A fully expected expansionary monetary policy with no change in fiscal policy.
   (b) (5 points) A fully expected expansionary monetary policy with an unexpected fiscal policy.

3. (10 points) For each of the changes in expectations, 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) (5 points) a decrease in the expected future real interest rate.
   (b) (5 points) an increase in the current money supply.

   Or

4. (10 points) Suppose that at age 22, you have just finished college and have been offered a job with a starting salary of ₹100,000. Your salary will remain constant in real terms. However, you have also been admitted to a professional school. The school can be completed in two years. Upon graduation, you expect your starting salary to be 10% higher in real terms and to remain constant in real terms thereafter. The tax rate on labor income is 40%.
   (a) (5 points) If the real interest rate is zero and you expect to retire at age 60 (i.e., if you do not go to professional school, you expect to work for 38 years total), what is the maximum you should be willing to pay in tuition to attend this professional school?
   (b) (5 points) What is your answer to part (a) if you expect to pay 30% in taxes?

Part B

5. (20 points) Suppose that every consumer is born with zero financial wealth and lives for three periods: youth, middle age, and old age. Consumers work in the first two periods and retire in the last one. Their income is $100 in the first period, $200 in the second, and $0 in the last one. Inflation and expected inflation are equal to zero, and so is the real interest rate.
   (a) (5 points) What is the present discounted value of labour income at the beginning of life? What is the highest sustainable level of consumption such that consumption is equal in all three periods?
   (b) (5 points) For each age group, what is the amount of saving that allows consumers to maintain the constant level of consumption you found in part (a)?
   (c) (5 points) Suppose there are 10 people born each period. What is total saving in the economy? Explain.
   (d) (5 points) What is total financial wealth in the economy?

6. (20 points) Consider an economy that suffers a fall in business confidence (which tends to reduce investment). Let *UIP* stand for the uncovered interest parity condition.
   (a) (10 points) Suppose the economy has a flexible exchange rate. In an $IS - LM - UIP$ 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 or amplify the effect of the fall in business confidence on output?
   (b) (10 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?

7. (20 points) *Consider an open economy characterized by the equations below.*

$$\begin{aligned} C &= c_0 + c_1(Y - T) \\ I &= d_0 + d_1 Y - b_1 i \\ IM &= m_1 Y \\ X &= x_1 Y^* \end{aligned}$$

   (a) (5 points) Write the equilibrium condition in the market for the domestic goods and solve for Y.
   (b) (5 points) Suppose government purchases go up by a unit. What is the impact on the output?
   (c) (5 points) How do net exports change when government purchases increase by one unit?
   (d) (5 points) There are two economies (one with $m_1 = 0.5$, and the other one with $m_1 = 0.1$). Each economy is characterized by $(c_1 + d_1 = 0.5)$. In which economy will fiscal policy have larger impact on output?