Nanyang Technological University
School of Social Sciences

HE2002 Macroeconomics II AY25-26 SEMESTER 2

Tutorial 4

1. **Chapter 5, Q5.**

   Considering the following numerical example of the IS-LM model:

$$C = 100 + 0.3Y_D$$

$$I = 150 + 0.2Y - 1000i$$

$$G = 200$$

$$T = 100$$

$$i = 0.03$$

   (a) Derive the IS relation. (Hint: You want an equation with Y on the left side and everything else on the right.)

   (b) The central bank sets an interest rate of 3%. How is that decision represented in the equations?

   (c) What is the level of real money supply when the interest rate is 3%? Use the expression:

$$(M/P) = 2Y - 4000i$$

   (d) Solve for the equilibrium values of C and I, and verify the value you obtained for Y by adding C, I and G.

   (e) Now suppose that the central bank increases money supply to 1500. How does this change the LM curve? Solve for Y, I and C, and describe in words the effects of an expansionary money policy.

   (f) Return to the initial situation in which the interest rate set by the central bank is 3%. Suppose that government spending increases to G=300. Summarize the effects of an expansionary fiscal policy on Y, I and C. What is the effect of the expansionary fiscal policy on the real money supply?

2. **Chapter 5, Q8.**

   What mix of monetary and fiscal policy is needed to meet the following objectives?

   (a) Increase Y while keeping i constant. Would investment (I) change?

   (b) Decrease a fiscal deficit while keeping Y constant. Why must i also change?

3. **Chapter 5, Q7. The fiscal-monetary policy mix in the aftermath of the Great Financial Crisis (an open-ended question)**

   The Great Financial Crisis left many nations with slow GDP growth rates and high levels of public debt. While most nations pursued a monetary policy, some nations simply lowered income taxes through expansionary fiscal policy.

   (a) Illustrate the effect of such a policy mix on output.

   (b) Why do the policy mix differ for different nations in 2008?

4. **Chapter 6, Q1.**

   Using the information in this chapter, label each of the following statements true, false, or uncertain. Explain briefly.

   (a) The nominal interest rate is measured in terms of goods; the real interest rate is measured in terms of money.

   (b) As long as expected inflation remains roughly constant, the movements in the real interest rate are roughly equal to the movements in the nominal interest rate.

   (c) When expected inflation increases, the real rate of interest falls.

   (d) The nominal policy interest rate is set by the central bank.