Macroeconomics
Time allowed: 1 hour 30 minutes

Answer **ALL** of the following questions.

1. **(30 marks)** Discuss **three** of the following

a) The determinants of investment.

b) The mechanism of the money multiplier.

c) The Paradox of thrift.

d) The demand for money and for bonds.

2. (**30 marks**) You are given information on prices and quantities for 3 goods (Goods A, B, and C) and for three years (2005, 2006 and 2007).

Quantities	A	B	C
2005	200	300	70
2006	220	350	80
2007	210	350	90

Prices	A	B	C
2005	9	8	5
2006	10	8	4
2007	11	9	3

Goods A and C are produced domestically. Good B is imported into the domestic economy. Good C is exported abroad.

a) Calculate nominal GDP for all three years. (**3 marks**)

b) Using 2005 as the base year calculate real GDP for all three years. (**3 marks**)

c) Calculate for each year the GDP deflator. Deduce the inflation rate for the years 2006 and 2007. (**5 marks**)

d) Calculate for each year the CPI index using quantities from 2005. Deduce the inflation rate for the years 2006 and 2007. (**5 marks**)

e) Assume now that Good B is produced domestically. What is the impact on the inflation rate according to both the GDP deflator and the CPI index? Calculate all changes. (**14 marks**)

3. **(40 marks)** Consider the following numerical version of the IS-LM model:

$$C = 600 + 0.7Y_D$$

$$I = 600 - 2000i + 0.1Y$$

$$G = 600$$

$$T = 500$$

$$\left(\frac{M}{P}\right)^d = 0.2Y - 4000i$$

$$\left(\frac{M}{P}\right)^s = 700$$

a) Find the equation for IS curve. **(5 marks)**

b) Find the equation for LM curve. **(5 marks)**

c) Solve for equilibrium real output (Y), equilibrium interest rate (i), disposable income (Y_D), consumption (C), investment (I) and private saving (S). **(6 marks)**

d) Verify that demand equals production and total savings equals investment. **(4 marks)**

e) Suppose that taxes decrease by 150 to 350. Solve again for Y, i, C and I and once again verify that demand equals production. Explain using words and diagrams the effects of this expansionary fiscal policy on Y,i, C and I. **(10 marks)**

f) Setting all variable back to their original levels, suppose now that policy makers want to increase the equilibrium real output by an expansionary monetary policy. Determine the new level of $\frac{\overline{M}}{P}$ which allows to increase the equilibrium real output by 500 to 6500. Solve again for i, C and I and verify that production equals demand. Explain using words and diagrams the effects of this expansionary monetary policy on i, C and I. **(10 marks)**