**ECO 102 – Introduction to Macroeconomics**

**Final Exam (2 hours and 30 minutes)**

**Fall 2015**

**Answer any 4 questions**

**Question: 1 (15 Marks)**

As identified in their 2014 election manifesto, the ruling party in ***Macademia***, pledged to increase the pace of progress in Power and Energy. Suppose following this decision, the government of the country, announces their plan for increasing the availability of solar energy through the **installation of 30 lakh units of solar panels.**

1. Which component of Aggregate expenditure will be primarily affected if the above was implemented? (C, I, G, X or IM). Is this expenditure autonomous or induced? Why? **(3)**
2. Imagine the economy was running a balanced budget (i.e. T-G = 0), how will the government’s plan discussed above impact their budget balance? **(2)**
3. As a result of the change in part (b), what impact can be expected in ***Macademia’s*** loanable funds market? Use an appropriate graph to show your answer. **(6)**
4. What do you expect will happen to the equilibrium interest rate, saving and investment in the economy? **(4)**

**Question: 2 (15 Marks)**

Macademian industries now approach the policymakers to revise their decisions and request for a more investment friendly climate. The policymakers discuss the present economic condition by looking at the consumption of energy and food as per the following table:

|  |  |  |
| --- | --- | --- |
| **2011** | | |
| **Item** | **Quantity** | **Price (Tk/unit)** |
| **Energy** | 200 | 30 |
| **Rice** | 30 | 20 |
| **2012** | | |
| **Item** |  |  |
| **Energy** | 220 | 50 |
| **Rice** | 40 | 15 |

***Considering 2011 as the base year,***

1. What is the cost of the RPI basket using 2011 prices? **(2)**
2. What is the cost of the RPI basket using 2012 prices? **(2)**
3. Calculate the inflation rate from 2011-2012. **(3)**
4. Find the Real GDP and Nominal GDP for both years. **(4)**
5. Calculate the economic growth rate. **(2)**
6. Given the present inflation rate, how do you think the government should revise the price of energy for households and industries? (2)

**Question: 3 (15 Marks)**

Consider the following information for a hypothetical economy in a given time period.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| G = 250 | I = 80 | X = 60 | | *m* = 0.03 | | *t* = 0.125 | | MPC = 0.7 | |
| *When YD = 0, C = 90* | | |  | |  | |  | |  | |

1. (i) Derive the AE function and (ii) Compute the multiplier. **(5)**

Imagine that the economy is in a ***Recessionary Gap of $270 million*** and as a finance minister you are asked to design a ***fiscal policy*** to recover this gap. You decide to use an ***expansionary fiscal policy*** by changing the desired ***government expenditure.*** (G).

1. Explain what is meant by an expansionary fiscal policy. **(2)**
2. How much Government expenditure should be increased or decreased to cover up this gap? (Hint: use the AE function and the multiplier) **(3)**
3. Show the change in **Government expenditure** discussed in part (c) in a diagram. **(2)**
4. Would the impact be same if the expansionary fiscal policy was designed by altering ***Taxes (T) instead of Government expenditure (G)***? Explain your answer. **(3)**

**Question: 4 (15 Marks)**

BKash, a subsidiary of BRAC Bank, provides safe, convenient and easy ways to make payments and money transfer services via mobile phones. The following quote is from an article published in one of the leading daily newspapers of Bangladesh stating BKash’s widespread popularity:

*“The latest publicly available data shows that by the end of 2013, just 30 months after its launch, bKash accounted for more than 11 million of the total 13 million mobile money users in Bangladesh. That made bKash the fastest-growing mobile payments company in the world in 2013. There is more to mobile payments than smart-phones and apps, and* ***bKash is a good example of how FINANCIAL INNOVATION can also happen in developing economies using low-cost technolog****y”(Dhaka Tribune,* 18th April, 2015).

1. What was the impact of the introduction of bKash on the **Money Market** of Bangladesh? Is it Demand side or Supply side? Explain using appropriate graphs. **(5)**
2. From your graph in part (a) suggest what likely happened to the equilibrium nominal interest rate and the equilibrium quantity of money in Bangladesh after the launch of bKash. **(3)**
3. If we assume that there is no change in price level, how may have the change in part (b) changed the ***Real Interest Rate*** and the ***Investment Expenditure (I)*** in the economy. **(4)**
4. Based on your answer in part (c), explain whether the borrowers or the lenders in the economy would be benefitted. **(3)**

**Question: 5 (15 Marks)**

“The weak state of manufacturing output… will pose a dilemma for Bank of England rate-setters who meet this week amid concerns that higher rates will encourage an influx of funds to the UK, pushing up the value of the pound….. Mark Carney, Bank of England governor, has been warning for many months that interest rates will start to rise off their record low of 0.5%...”  (*The Guardian*, 7th December, 2015).

1. What kind of output gap is present because of the current state of the manufacturing sector of the UK? Use an AS-AD diagram to illustrate this phenomenon. **(3)**
2. Imagine that you are a member of the Monetary Policy Committee of the Central Bank of the UK. What changes to the monetary policy (if any) would you recommend to stimulate the manufacturing sector? Explain with the help of diagrams the effect of your proposed changes. **(6)**
3. What would be the combined effect on the economy if the government decides to employ an expansionary fiscal policy along with the changes you have proposed in part b)? Explain using diagrams. **(6)**

**Question: 6 (15 Marks)**

1. The following information is from the Bangladesh Labour Force Survey 2010:

|  |  |
| --- | --- |
| Number of people employed | 54.1 million |
| Number of people unemployed | 2.6 million |
| Economic activity rate | 59.3 |

Using the following information, find the unemployment rate and the employment rate. (Hint: combine the formulae) **(4)**

1. If the value of the Taka changed from BDT 110 for 1 USD in 2012 to BDT 100 for 1 USD in 2013, how will it affect exports? What will be the impact on imports? How will this affect Bangladesh’s aggregate demand? **(4)**
2. Suppose due to increase in price of electricity, production cost of garment industry increased, which resulted in job loss of many garment workers. Which type of unemployment may be created? Why? Can you illustrate graphically the change in the AS-AD model? **(5)**
3. Given the information above, what happens to the Natural Rate of Unemployment? Explain. **(2)**

**Question: 7 (15 Marks)**

1. Illustrate and describe the impact of imposing a tax on labour income and the related impact on employment and GDP. (4)
2. Given that firms that have relied on advanced technology, required a highly skilled labour force, what type of government spending do you think would help to promote learning the new skills.
3. Given that government spending may increase in one sector, how do you think they can revise their fiscal policy to balance the budget?
4. When demand for loanable funds exceeds the supply of loanable funds,, households want to save less than the firms want to invest. By drawing a diagram show what happens to the interest rate. (4)