**NATIONAL UNIVERSITY OF LESOTHO**

**MSc EXAMINATIONS**

# EC6303 – Advanced Macroeconomics I

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| **January 2024** | **100 Marks** | **3 Hours** |

**INSTRUCTIONS:**

**1)** Answer any two questions from Section A and any two questions from Section B.

**2)** Explain your answers and show relevant workings or graphs where applicable.

## SECTION A

### Question 1

**a)** The Lesotho economy has recorded persistent current account deficits in the last 12 years. Mathematically show, as per the Marshal-Lerner condition, what a devaluation of the loti will imply. Clearly stating the conditions in which the current account can improve. **[10]**

**b)** What will be your analysis of the Marshal-Lerner condition if the economy experiences a complete shutdown as was the case with the COVID lockdown where exports and imports were completely impossible? **[5]**

**c)** Graphically explain and mathematically derive the equilibrium conditions for the product and money markets for a static economy. **[10]**

### Question 2

**a)** In an attempt to maintain perfect capital mobility, how will fiscal and monetary policies be employed in,

- ***i.*** A fixed exchange rate regime. **[5]**
- ***ii.*** A floating exchange rate regime. **[5]**

**b)** In a situation where both inflation and unemployment are very high, will you as a minister of finance advocate for a monetary or fiscal policy to improve employment in Lesotho? Why or why not? **[8]**

**c)** Explain in detail what is meant by money illusion and how its existence or non-existence may affect labour supply. **[7]**

**Question 3**

Given that, the price dynamics in terms of deviations from the long-run equilibrium values of the exchange rate and the price level are given as,

$$\dot{p} = -\pi\left(\delta + \frac{\sigma}{\gamma}\right)(p - \bar{p}) + \pi\delta(e - \bar{e}), \quad \pi(\text{coef of excess dd}) > 0$$

where $p$ is the price level, $e$ denotes the logarithm of the spot exchange rate, $\bar{p}$ is the long-run equilibrium price and $\bar{e}$ is the long-run exchange rate,

**a)** Clearly state the uncovered interest rate parity of this model. **[4]**

**b)** In a situation of sticky prices, explain with the aid of graphs, the exchange rate overshooting in response to monetary shocks. **[9]**

**c)** Briefly explain how the sticky price theory differs from the monetary approach and the purchasing power parity theories of determining exchange rates. **[6]**

**d)** Given that $\dot{e} = \frac{1}{\gamma}(p - \bar{p})$ expresses the dynamics of the current spot exchange rate in terms of the deviations of the current price level from its long-run equilibrium level and $\gamma$ is the semi-elasticity of money demand with respect to the interest rate, explain how an economic team can determine exchange rate when the money demand is elastic, inelastic and unitary elastic. **[6]**

## SECTION B

**Question 4**

In areas of developing countries, particularly in sub-Saharan Africa, access to insurance and credit markets is limited and borrowing constraints are pervasive.

**a)** What mechanisms do households use to insulate themselves from income fluctuations to smooth their consumption? Briefly discuss two. **[5]**

**b)** Show how uncertainty brought by shocks such as droughts and macroeconomic changes could affect households' saving and consumption behaviour. Would the behaviour be the same for both the rich and the poor? Explain. **[10]**

**c)** Recommend two relevant policies that governments could implement to cushion poor households from shocks. Would such policies be sustainable? Justify. **[10]**

**Question 5**

In the modern era of globalization, geopolitical risk has become one of the primary threats and challenges faced by businesses and corporations, including the ones in developing and emerging market economies.

**a)** Discuss how geopolitical risk influences firms' investment decisions. **[5]**

**b)** Given that geopolitical risk is expected to heighten in the long term, while at the same time, central banks are hiking interest rates to curb inflation in the medium term, show and explain how these developments affect firms' investment decisions. **[10]**

**c)** Suppose the government is considering voting for the introduction of the temporary investment tax credit as part of its stimulus package, show and explain how this policy would affect the firms' investment decisions when the adjustment costs are irreversible and asymmetric. **[10]**

**Question 6**

**a)** Why would wages, especially in developing economies with high and persistent levels of unemployment, not adjust to equate labour supply to labour demand? Use the predictions of at least three models of unemployment to discuss this issue. **[15]**

**b)** Could the introduction of minimum wages, in a low-wage sector, operate as efficiency wages? And how should governments in developing countries balance the introduction of minimum wages and their efforts to tackle unemployment? Justify. **[10]**