NATIONAL UNIVERSITY OF LESOTHO

EC4303: Monetary Economics
BA Examination

[SUPPLIMENTARY]

August 2023	**Marks 100**	**Time: 3 Hours**

***Instructions**:*

1. *Show all necessary workings and make clear drawings of graphs.*
2. *Answer **any four** questions.*

Question 1

a) How can a central bank overcome the time-inconsistency problem? [6 marks]

b) How realistic are the implications of Baumol-Tobin model in the context of Lesotho given the choice that can be made between holding money and keeping it in an interest-bearing savings account? Justify. [7 marks]

c) When in a liquidity trap, it is difficult for a country to affect the exchange rate using monetary policy. Discuss. [6 marks]

d) You have recently heard of the reports that the Reserve Bank of South Africa has significantly lowered its interbank rate – *the repo rate*. Does this imply that the Bank is moving to a more expansionary monetary policy? Why or why not? [6 marks]

Question 2

a) If the South African Reserve Bank can deviate from its mandate and print money to reduce unemployment, what would happen to the value of the rand in the short-run and the long-run? Use relevant models to support your answer. [7 marks]

b) What are monetary policy transmission mechanisms and why are they important? [6 marks]

c) What is the Taylor Rule and why is it important? [6 marks]

d) Foreign exchange rates can also confuse central bankers and their policies. Specifically, increasing (decreasing) interest rates will, ceteris paribus, cause a currency to appreciate (depreciate) in world currency markets. Why is that important? [6 marks]

Question 3

a) The Fed thought that it would quickly squelch the recession that began in March 2001, yet the downturn lasted until November of that year. The terrorist attacks that September worsened matters, but the CB had hoped to reverse the drop in Y* well before then. Why was the CB's forecast overly optimistic? [5 marks]

b) How can the central bank be insulated from short-run pressures to pursue expansionary policy at the expense of high inflation? [10 marks]

c) In a situation that Lesotho removes tariffs on imports while at the same time, the demand for its exports is increasing.

i. How would that affect the value of its currency relative to the Rand? Justify. [5 marks]

ii. What would the Central Bank of Lesotho do to maintain the peg between Loti and Rand? Justify. [5 marks]

Question 4

a) As a young graduate, you have just obtained a contract that pays you M4,500 per month and you are using all that money to cover your monthly expenses, which must be financed through cash. Suppose commercial banks are promising to give you an interest rate of 1.77% per month if your money is kept in their savings account, but they will charge you a fixed fee of M10 plus 0.1% of the amount withdrawn every time you withdraw your money. If you choose to take advantage of this offer,

i. What would be the amount of withdrawals, the number of times you would have to make them and the cost of holding money over a month? [6 marks]

ii. If the commercial banks increase the interest rate to 4% per month, how would your previous plan change? [6 marks]

b) Given the following objective function of the central bank, the economy's supply constraint and the constraint from the demand side, respectively:

$$U = \lambda(y - y^f) - \frac{1}{2}\pi^2 , \qquad \lambda > 0;$$

$$y = y^f + \alpha(\pi - \pi^e) + \mu , \quad \alpha > 0;$$

$$\pi = \Delta y^d + \varepsilon$$

i. Explain the significance of the parameters α and λ. [6 marks]

ii. Determine the levels of inflation and utility under commitment and discretion, and comment on the policy choice of the central bank. [7 marks]

Question 5

a) Discuss the role played by financial innovation in explaining the predictability of velocity and stability of money demand. [10 marks]

b). Discuss the limitations of The Modern Quantity Theory of Money. [5 marks]

c). Given the following information regarding the Central Bank of Algeria (CBA)'s model of multiple deposit creation for monetary policy decision-making:

Table 1

Currency in Circulation (*C*) = DZD 2,200 Million	Time/Savings Deposits (*T*) = DZD 3,500 Million
Demand Deposits (*D*) = DZD 10,000 Million	Money Market Funds (*MMF*) = DZD 500 Million
Excess Reserves (*ER*) = DZD 600 Million	-

i. Determine the level of broad money supply, through the money multiplier approach, that CBA needs to target given that the monetary base is DZD 3, 150 Million. [5]

ii. What type and amount of open market operation (OMO) would the CBA take to increase broad money by one fifth? [5]