NATIONAL UNIVERSITY OF LESOTHO

BA EXAMINATIONS

EC4305 – INTERNATIONAL TRADE

January, 2024	100 Marks	3 Hours

Instructions

1. Answer **any four** questions
2. Show all your workings and interpret your answers

Question 1

The 2022 World Bank Report on the African Continental Free Trade Area (AfCFTA) titled *Making the most of the AfCFTA* highlights that the AfCFTA presents a major opportunity for African countries to bring 30 million people out of extreme poverty and to raise the income of 68 million others who live on less than $5.50 per day.

a) Apply the theory of the Ricardian Model to explain how improved infrastructure, facilitated by the AfCFTA, might enhance the comparative advantage in certain African countries, in the provision of transportation, logistics, or other key services. Limit your discussion to the potential positive feedback loop between infrastructure and comparative advantage. **[5]**

b) According to the Ricardian comparative advantage model, how might the AfCFTA influence the specialization and trade patterns in the manufacturing sector among African countries? Limit your discussion to market access, competitiveness, and regional specialization. **[10]**

c) In the specific case of Lesotho, how might effective policy measures support the development and application of comparative advantage in addressing potential coordination failures or market imperfections in order to take a full advantage of the AfCFTA? **[10]**

Question 2

Suppose that when Lesotho engages in free trade with Eswatini, Lesotho becomes a net importer of mohair from Eswatini. To protect the domestic mohair industries, the Government of Lesotho enacted a protectionism policy by imposing a tariff of M2/ton of mohair imported from Eswatini. Given the following linear domestic Demand and Supply functions for mohair:

$$Q_d = 100 - 2P$$
$$Q_s = 20 + 3P$$

a) Consider the autarky market equilibrium for Lesotho's mohair. Upon opening up to international trade, the world price of mohair, becomes, $P^W = 13$. Illustrate graphically, the impact of this world price on Lesotho's imports. **[10]**

b) Calculate, and show on a separate graph, the net effect of a tariff on Lesotho's welfare. **[10]**

c) Now, suppose that the governments of the two trading partners enter into a Double Taxation Agreement that includes the elimination of all trade barriers between the two countries, calculate the net effect of this trade agreement on Lesotho's net welfare, and interpret your answer. **[5]**

Question 3

a) Explain the economic intuition behind the gravity model, and how each component (GDP and distance) contributes to the model's predictions in the context of international trade. **[5]**

b) Analyze the limitations of the gravity model in explaining all factors influencing international trade, with the provision of examples of factors that may not be adequately captured by the gravity model. **[5]**

c) The 2023 African Forum on International Trade highlighted that the implementation of the African Continental Free Trade Area has led to an increase in trade between Lesotho, Botswana and Namibia.

Table 1: Countries' GDPs and Distances

Country	GDP in 2023 ($billions)	Distance from Lesotho (km)
Botswana	20.76	883
Namibia	12.65	1,711
Lesotho	2.61	-

i. Assuming that these countries' markets are monopolistically competitive, using the gravity equation with the gravity term $\beta = 93$ and $n = 1.25$, compare the expected level of trade between Lesotho and Botswana and between Lesotho and Namibia. **[10]**

ii. The distance between Gaborone[1] and Windhoek is 1,091 km. Would you expect Botswana to trade more with Namibia or more with Lesotho? Explain what variable (i.e., country size or distance) drives your result. **[5]**

Question 4

Suppose Home country is the United States (US), which is capital-abundant, and computer production is capital-intensive. On the hand, Foreign country is Bangladesh, which is labor-

[1] Gaborone is a capital of Botswana, and Windhoek is a capital of Namibia

abundant, and shoe production is labor-intensive. Applying the Heckscher-Ohlin model of resource endowment;

a) Draw the PPFs and consumption points of both the US and Bangladesh on separate graphs, reflecting the trade-off between computers and shoes. [NB: Put output of computers on the x-axis] **[5]**

b) Show impact on production when both countries engage in international trade, clearly indicating the patterns of trade on the single graph. **[10]**

c) From b), show graphically, the free-trade world equilibrium price and quantity of computers. **[5]**

d) Given the Heckscher-Ohlin model's assumptions about resource endowment and the Ricardian model's focus on technological differences, analyse how the patterns of trade observed in b) align or differ when considering comparative advantage. **[5]**

Question 5

The National University of Lesotho (NUL) has signed a Memorandum of Agreement with Samsung to launch the Samsung Innovation Campus that will equip students with essential skills for the 4th industrial revolution.

a) Consider a simplified model of Samsung production that requires Research & Development (R&D), Assembly, Marketing & Sales, and Component Production.

- **i.** Slice the value chain, indicating activities that will be done at NUL and activities to be done by the Samsung company, justifying why you have sliced the activities at the particular point. **[5]**
- **ii.** Using both the slicing value chains and the demand curve, illustrate what will happen to the slicing of activities and the relative demand for skilled labour as the cost of trade falls in Lesotho. **[5]**

b) Starting from the offshoring equilibrium, trace how a fall in the relative price of component production will affect Samsung company's equilibrium. **[10]**

c) On a separate graph, trace the gains (or losses) from trade for Samsung company when the relative price of R&D falls. **[5]**

Question 6

a) Starting from the long-run monopolistic competition equilibrium without trade, show the graphical analysis of the short-run monopolist competition equilibrium with trade in relation to:

i. Firm's demand curve's elasticity. **[5]**

ii. Firm's short-run equilibrium price and quantity, when all firms charge the same price. **[5]**

b) Comment with an explanation, on the demand curves in i) and ii) above, when firms charge different prices and when they charge same the price. **[5]**

c) Consider Lesotho and South Africa (SA) which both produce cloth and wine. In Lesotho, 1 unit of cloth requires 2 units of labor, while 1 unit of wine requires 3 units of labor. In SA, 1 unit of cloth requires 4 units of labor, while 1 unit of wine requires 2 units of labor.

i. Suppose the two countries decide to specialize and engage in international trade, draw a set of PPFs for each country indicating the potential gains from trade between the two countries. **[5]**

ii. From (i), show and interpret the trade triangle in each country made possible by trade. **[5]**