

> Paper 3 (HL only)

In Paper 3 there are two compulsory questions (there is no choice). Each question is split into two parts, (a) and (b). Part (a) is sub-divided into several sub-parts worth 20 marks, while part (b) is worth 10 marks. There are therefore 30 marks per question, and 60 total marks for paper 3. (For more information see *Introduction to IB Economics assessment: Exam papers and internal assessment* in the digital coursebook.)

Question 1

Riverland has been experiencing balance of payments difficulties over a period of several years. It imports most consumer electronics from nearby Mountainland. For decades, Riverland's exports were roughly in balance with its imports. Exports came from two specialised industries, fishing and lumber, but these two industries have seen a major decline due to climate change which caused damage to Riverland's natural resources. This, combined with Riverland's rising hunger for consumer electronics, has created a significant current account deficit. This has alarmed some economists who argue that if this persists, Riverland's economy could suffer.

Table 1 presents its balance of payments accounts for the year 2019. Note that the Rvl is Riverland's currency.

1	Current account	
2	Balance of trade in goods	−17.0
3	Balance of trade in services	−7.5
4	Income	+2.5
5	Current transfers	
6	Balance on current account	−16.3
7	Capital account	
8	Capital transfers	+0.7
9	Transactions in non-produced, non-financial assets	+1.2
10	Balance on capital account	+1.9
11	Financial account	
12	Foreign direct investment	+4.5
13	Portfolio investment	+1.7
14	Reserve assets	+3.5
15	Official borrowing	+4.7
16	Balance on financial account	

Table 1: Balance of payments accounts for Riverland, 2019 (billions of Rvl)

- a
- Calculate the value of **current transfers** in Riverland's balance of payments (row 5). [2 marks]
 - Calculate the **balance on financial account** (row 16), stating whether this is in surplus or in deficit. [2 marks]
 - Using the concepts of debits and credits and the information in Table 1, explain why surpluses and deficits add up to zero. [4 marks]
 - State what item in Riverland's balance of payments accounts has led to its balance of payments difficulties. [1 mark]
 - Considering the entry for reserve assets (row 14), outline what type(s) of exchange rate system Riverland is likely to have. [2 marks]
 - Using an exchange rate diagram, explain what would happen to the Rvl if Riverland's central bank did not intervene [4 marks]

Riverland's GDP in 2019 was 117.3 billion Rvl, while its $MPS + MPT + MPM = \frac{1}{4}$.

- vii Calculate the new level of GDP that likely resulted following a decrease in exports of 205 million Rvl. [3 marks]

Population	Labour force	Part-time workers	Full-time workers	Actively looking for work
4 500 200	2 500 000	225 000	1 900 000	375 000

Table 2: Riverland's labour statistics in 2019

- viii Calculate Riverland's unemployment rate in 2019. [2 marks]
- b Using the information in the texts and data and your knowledge of economics, recommend a policy that the government of Riverland could pursue to reduce its current account deficit. [10 marks]

Question 2

Table 1 presents price and quantity data corresponding to the demand curve of good Z in a country called Sunnyland.

Price per unit (\$)	5	10	15	20	25	30
Q demanded per week (kg)	30	25	20	15	10	5
Total revenue						

Table 1: Price and quantity data for good Z in Sunnyland

- a i Calculate price elasticity of demand (*PED*) for an increase in price from \$5 to \$10, and for an increase in price from \$20 to \$25. [2 marks]
- ii Calculate total revenue that corresponds to each price and quantity combination. [2 marks]
- iii Using your answers to parts (i) and (ii) and the concept of price elasticity of demand, explain what happens to total revenue as the price of good Z increases. [4 marks]

Table 2 shows data from Snowland's national income accounts. The Snl is Snowland's currency.

Year	2018	2019	Rate of growth 2018-2019
Real GDP (million Snl)	5000	5100	
Real GDP <i>per capita</i> (Snl)	2000	1980	

Table 2: Snowland's national income accounts

- iv Calculate the rate of growth in real GDP and in real GDP *per capita* for the period 2018-2019. [2 marks]
- v Explain how it is possible for real GDP to be increasing while real GDP *per capita* is falling. [2 marks]

Snowland consists of two states: Upper Snowland and Lower Snowland. Each state has its own tax system with its own tax rates. Table 3 shows the amount of total (direct and indirect) taxes paid in each state on two different annual income levels (in Snl, the national currency).

Annual income (Snl)	Upper Snowland Amount of tax paid annually (Snl)	Upper Snowland Average tax rate	Lower Snowland Amount of tax paid annually (Snl)	Lower Snowland Average tax rate
25 000	5 750		5 750	
36 000	8 280		7 200	

Table 3: Amount of total (direct and indirect) taxes paid in Upper Snowland and Lower Snowland

- vi Calculate average tax rates for Upper and Lower Snowland for the two income levels. [2 marks]
- vii Explain which of the two tax systems shown in Table 3 is likely to be more appropriate as a method to make the distribution of income more equal. [4 marks]
- viii Draw two Lorenz curves, one for Upper Snowland and one for Lower Snowland, showing where they are likely to be located in relation to each other. [2 marks]

In recent years, it has been observed that the Human Development Index in Lower Snowland has decreased at the same time that GNI *per capita* has grown. Economists argue that Lower Snowland should reform its tax system.

- b Recommend a policy other than changes in the tax system that the state government of Lower Snowland can implement in order to address the problem of a decreasing Human Development Index. [10 marks]