UNIVERSITY OF JOHANNESBURG

SCHOOL OF ECONOMICS AND ECONOMETRICS

ECONOMICS 100

<u>APS ASSESSMENT</u>

ATTENDANCE FORM

Surname	
Initials	
Student number	
Venue	

GENERAL INSTRUCTIONS

1. **Do not remove the staple – hand this paper in.**
2. **Remove <u>only</u> the top page (this page).**
3. **Make sure that your paper has 11 numbered pages.**

JANUARY 2019

SCHOOL OF ECONOMICS AND ECONOMETRICS

ECONOMICS 100

APS ASSESSMENT

Date: 7 JANUARY 2019
Marks: 100
Time: 2 hours
Assessors: Prof G van Zyl, Z Pahla, F Kirsten, Dr M Maleka (Internal Assessor)

1. The paper consists of six questions (including sub-sections).
2. Noiseless calculators may be used.
3. Answer all the questions.

Surname																				

Initials			

Student number									

	Marks	Total
Q.1.1	[4]	
Q.1.2	[3]	
Q.1.3	[3]	
Q.2.1	[3]	
Q.2.2	[7]	
Q.2.3	[5]	
Q 3.1	[8]	
Q.3.2	[4]	
Q.3.3	[3]	
Q.3.4	[5]	
Q.4.1	[5]	
Q.4.2	[5]	

	Marks	Total
Q.5.1	[3]	
Q.5.2	[2]	
Q.5.3	[5]	
Q.5.4	[2]	
Q.5.5	[3]	
Q 5.6	[3]	
Q.5.7	[2]	
Q.6.1	[5]	
Q.6.2	[9]	
Q.6.3	[4]	
Q.6.4	[2]	
Q.6.5	[5]	
TOTAL	[100]	

Question 1: Trade cycles	[10]

1.1 Economic growth statistics indicate that South Africa is technically in a **boom phase**. The aim of policy makers is to push the economy to an **economic boom**. Explain briefly the **stylised facts** that are indicative of an **economic boom**. **(4)**

1.2 Explain briefly the standing of capital expenditure, the yield curve and corporate finance during the boom phase. **(3)**

1.3 Indicate the expected state of the following economic indicators during the boom phase of the business cycle**.** **(3)**

Economic indicators	Stance
Capacity utilisation.	
Household debt relative to income.	
JSE All share index.	

Question 2: Money, interest rates and financial markets	[15]

2.1 Link the following concepts to the descriptions below. **(3)**

Concepts
Fiat money
Inflation target
Seigniorage
Prime rate
Quantitative easing
Liquidity shortage

Description	Concept
Central Bank buys financial instruments with the aim of stimulating the economy.	
Commercial banks collectively need to borrow funds from the SARB.	
The difference between the face value of paper money and the cost to produce that paper money.	
Rate paid by best clients of a bank when they borrow money.	
The current inflation band (based on CPI) set by the SARB is between 3% and 6%.	
Cash backed by trust.	

2.2 Assume that the face value of a government bond is R500 000 and the coupon is R10 000. The current trading price of the same bond in the market is R600 000. **(7)**

What is the nominal yield of this bond?	
What is the current market yield of this bond?	
Assume that the SARB is selling & buying these government bonds on the open market. What will happen to the market yield of these bonds on the open market if i) the SARB is a net seller of these bonds or ii) the SARB is a net buyer of these bonds on the open market? The SARB has decided to use its open-market transaction activities to restrict the growth in credit creation. Indicate the action of SARB on the open bond market. Illustrate how this action will transmit to the real sector of the economy.	**Net seller:** **Net buyer:** **Action of SARB:** **Transmission**:

2.3 Assume that the SARB has **increased the repo-rate** due to excessive credit creation by the banking sector. Indicate with the aid of a fully annotated figure the impact on the yield curve when the higher short-term rates will slow down lending and allow the banks' reserves to catch up. Indicate clearly the relationship between the short run and long-run rates and the slope of the yield curve. **(5)**

Question 3: International trade and finance	[20]

3.1 Consider the following monthly production and consumption information of product A and product B. Sapco and Sosco countries are trading partners.

- **Production information.**

For the same time schedules 1) Sapco can produce 400m metric tons of product A and 300m metric tons of product B and 2) Sosco can produce respectively 50m metric tons of product A and 60m metric tons of product B.

- **The pre-trade consumption pattern (in millions of metric tons).**

	Product A	**Product B**
Sapco	350	18
Sosco	17	15

Assume that the price ratio is 1:1 and that Sapco and Sosco would trade 20m metric tons of product A for 20m metric tons of product B. It is clear from the data that Sapco has an absolute advantage in the production of both product lines but trade can occur based on relative advantage. Determine how **trade specialisation** could take place, **new consumption levels** and the **possible gains for consumers** in both Sapco and Sosco. (Show all your calculations) **(8)**

Sapco:

Sosco:

3.2 Explain briefly the **avenues for investment** in another country. **(4)**

3.3 The South African rand **appreciated** to R12.28/$. Explain briefly the impact on imports, exports and portfolio investment. **(3)**

Imports:

Exports:

Portfolio investment:

3.4 Assume that the current spot rate is R15.35/$ and the six-month forward rate is R13.85/$. Your gut feeling is telling you that the South African rand should depreciate even further. You have R2 302 500 available to speculate with. Assume that the South African rand did indeed depreciate to R16.25/$. Indicate clearly how you would speculate in the currency markets. **(5)**

Question 4: The role of the government	[10]

4.1 Some policy makers argues that individual tax rates in South Africa is too high and that it might have a negative impact on incentives to work more (higher productivity). Apply the **Laffer curve** to explain this negative microeconomic impact of taxation. **(5)**

4.2 Read the statement from the SARB Quarterly Economic Review June 2018 and answer the questions that follow. **(5)**

*"In order to finance the larger borrowing requirement, [**the deficit before borrowing on the budget of National Government**] <u>increased to 52.7%</u> of GDP as at 31 March 2018…"*

Indicate (with an **X**) whether you agree or disagree with the following statements that relate to the statement above.

Statements	Agree	Disagree
Interest rates will decrease.		
Interest rates will increase.		
The interest payments of government will decrease.		
Government debt will increase.		
There will be a 'crowding-out' effect for the private sector.		

Question 5: Total expenditure model	[20]

5.1 Consumer expenditure is the most important driver for economic growth. Briefly explain how changes in the following variables might affect consumer expenditure. **(3)**

Variable	Impact
Availability and the cost of credit.	
Age of durable goods.	
Inventory assets.	

5.2 Explain briefly the impact of taxation and economic conditions on capital formation. **(2)**

Questions 5.3 - 5.7 apply to the following information for a small country

- Autonomous consumption expenditure is \$60 000 when equilibrium income is \$80 000.
- Autonomous fixed capital formation is \$30 000
- Autonomous government expenditure is \$60 000
- The average tax rate is 20%
- Net exports is -\$15 000
- The full-employment GDP is \$350 000

5.3 Determine the marginal propensity to consume (MPC) and derive the savings function. Illustrate with a fully annotated figure. **(5)**

5.4 Calculate the slope of the aggregate spending line. **(2)**

Slope of the aggregate spending line:

5.5 Calculate the multiplier. **(3)**

Multiplier:

5.6 Calculate the equilibrium income level (Ye) and induced consumption expenditure. **(3)**

<u>Equilibrium income level</u>:   **<u>Induced consumption expenditure</u>**:

5.7 Calculate the income gap and the required increase in fixed capital investment to close the gap. **(2)**

<u>Income gap</u>:   **<u>Required increase in fixed capital investment</u>**:

Question 6: Macroeconomic policy **[25]**

6.1 Link the following descriptions to the different determinants of exchange rates (**<u>price differentials</u>** or **<u>differentials in interest rates</u>** or **<u>balance on current account</u>** or **<u>monetary policy</u>** or **<u>political stability</u>**). **(5)**

Descriptions	Determinant
Stable countries with strong economic performance.	
Deficit or surplus on the current account of balance of payments.	
Restrictive or expansionary policy.	
Higher or lower interest rates.	
Higher or lower inflation rates.	

6.2 Assume that the government is embarking on a substantial **increase in government spending**. Indicate the impact on the listed aggregates. **(9)**

Aggregate	Increase/Decrease
Primary effect on aggregate spending.	
Primary effect on GDP.	
Income levels in the economy.	
Private spending.	
Transaction demand for money.	
Interest rates.	
Investment spending.	
Secondary effect on aggregate spending.	
Secondary effect on GDP.	

6.3 Assume the following descriptions that deal with short run and long run equilibrium. Indicate with an **X** which of the description do you agree or disagree with. **(4)**

Description	Agree	Disagree
Long-run equilibrium is the intersection of the aggregate demand curve and the short-run aggregate supply curve.		
Long-run equilibrium is the intersection of the aggregate demand curve and the long-run aggregate supply curve.		
Short-run equilibrium in the AD-AS model is based on equilibrium in the labour market and financial markets.		
Short-run equilibrium in the AD-AS model is based on equilibrium in the product market and financial markets.		

6.4 Link the following two descriptions with the different financing methods. Indicate the financing method (**borrowing from the central bank** or **attracting foreign loans**) for each description. **(2)**

Description	Financing method
An inflow of funds, downward pressure on the interest rates and an expansionary impact on the economy.	
More money entering the circular flow and the interest rates will decrease with an expansionary impact.	

6.5 Consider a **BP-curve**. Assume that SA is currently experiencing balance of payment equilibrium (at income Y_o and interest i_o). The following descriptions deal with the sequence of events when the **income level increases**. Choose the correct option. **(5)**

Descriptions	Answer
Imports will (**increase** or **decrease**).	
There will be a (**surplus** or **deficit**) on the current account.	
(**Stimulatory** or **restrictive**) monetary policy will be applied to resolve the situation on the current account.	
Interest rates will (**increase** or **decrease**).	
There will be an (**inflow** or **outflow**) of capital.	