

ECS2602

MAY/JUNE 2015
MEI/JUNIE 2015MACROECONOMICS
MAKRO-EKONOMIE

STUDENT NUMBER / STUDENTENOMMER							

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VIR.GEBRUIK DEUR EKSAMENOPSIENERS

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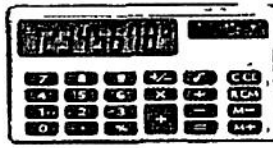
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**ECS2602**

(474830)

May/June 2015
Mei/June 2015**MACROECONOMICS
MAKRO-EKONOMIE**Duration 2 Hours
Tydsduur 2 Uur100 Marks
100 Punte**EXAMINERS / EKSAMINATORE**
 FIRST / EERSTE MRS/MEV MD UYS
 SECOND / TWEDE MR/MNR FHB SERFONTEIN

 Use of a non-programmable pocket calculator is permissible
 Gebruik van 'n nie-programmeerbare sakrekenaar is toelaatbaar

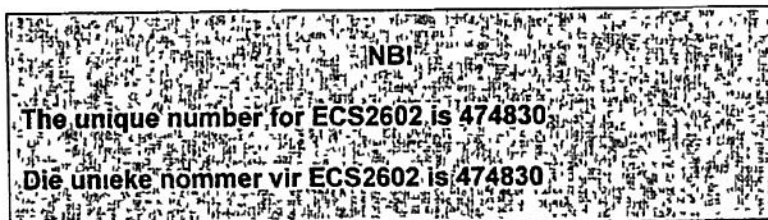
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This paper consists of 34 pages, instructions for the completion of a mark reading sheet and a special front page

Hierdie vraestel bestaan uit 34 bladsye, instruksies vir die voltooiing van 'n merkleesblad en 'n spesiale voorblad

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**[TURN OVER]
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The following abbreviations may appear in this examination paper

Die volgende afkortings mag in hierdie eksamenvraestel voorkom

ENGLISH

c	-	marginal propensity to consume
C	-	consumption spending
D _B	-	demand for bonds
E	-	nominal exchange rate
E ^e	-	expected nominal exchange rate
ε	-	real exchange rate
G	-	government spending
I	-	investment spending
i [*]	-	foreign interest rate
M ^d	-	demand for money
M ^s	-	supply of money
M/P	-	real money supply
NX	-	trade balance
P	-	price level
P _B	-	price of bonds
S _B	-	supply of bonds
W	-	nominal wage
W/P	-	real wage
X	-	exports
Y	-	output and income level
Y [*]	-	foreign output and income level
Y _N	-	natural level of output
Z	-	total demand
ZZ	-	demand for domestic goods

AFRIKAANS

c	-	grensverbruiksgeneigdhed
C	-	verbruiksbesteding
D _B	-	vraag na effekte
E	-	nominale wisselkoers
E ^e	-	verwagte nominale wisselkoers
ε	-	reele wisselkoers
G	-	owerheidsbesteding
I	-	investeringsbesteding
i [*]	-	buitelandse rentekoers
M ^d	-	vraag na geld
M ^s	-	aanbod van geld (geldvoorraad)
M/P	-	reele geldvoorraad
NX	-	handelsbalans
P	-	pryspeil
P _B	-	prys van effekte
S _B	-	aanbod van effekte
W	-	nominale lone
W/P	-	reele loon
X	-	uitvoer
Y	-	produksie- en inkompeil
Y [*]	-	buitelandse produksie- en inkompeil
Y _N	-	natuurlike produksiepeil
Z	-	totale vraag
ZZ	-	vraag na binnelandse goedere

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Read all instructions CAREFULLY before answering the questions
This paper consists of two (2) sections A and B

Lees al die instruksies NOUKEURIG voor u die vrae beantwoord
Hierdie vraestel bestaan uit twee (2) afdelings A en B.

SECTION A: COMPULSORY (50 marks)
AFDELING A VERPLIGTEND (50 punte)

INSTRUCTION ANSWER ALL THE QUESTIONS
INSTRUKSIE BEANTWOORD AL DIE VRAE

QUESTION 1/VRAAG 1 (14 marks/14 punte)

Question 1 is based on the following information

Marginal propensity to consume	=	0.8
Autonomous consumption spending	=	R100 million
Investment spending	=	R50 million
Government spending	=	R40 million
Taxes	=	R20 million
Full employment level of output and income	=	R980 million

Vraag 1 berus op die volgende inligting

Grensverbruiksgeneigdheid	=	0.8
Outonome verbruiksbesteding	=	R100 miljoen
Investeringsbesteding	=	R50 miljoen
Owerheidsbesteding	=	R40 miljoen
Belasting	=	R20 miljoen
Volle indiensnemingsproduksie- en inkompeil	=	R980 miljoen

a Calculate the multiplier Show the formula and calculations (1)

a Bereken die vermenigvuldiger Toon die formule en berekeninge (1)

$$\begin{aligned}
 d &= \frac{1}{1 - mpc} \\
 &= \frac{1}{1 - 0.8} \\
 &= 5
 \end{aligned}$$

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- b Calculate autonomous spending Show the formula and calculations (1)
- b Bereken outonome besteding Toon die formule en berekeninge (1)

$$\begin{aligned} Z_0 &= C_0 + I + G - cT \\ &= 100 + 50 + 40 - 0.8(20) \\ &= 174 \end{aligned}$$

- c Calculate the equilibrium level of output and income Show the formula and calculations (2)
- c Bereken die ewewigsproduksie- en -inkomepeil Toon die formule en berekeninge (2)

$$\begin{aligned} y^e &= \alpha \times Z_0 \\ &= 5 \times 174 \\ &= 870 \end{aligned}$$

- d Calculate the income gap between the current level of output and income and the full employment level of output and income Show the formula and calculations (1)
- d Bereken die inkomegaping tussen die huidige produksie- en inkomepeil en die volle indiensnemingspeil van produksie en inkome Toon die formule en berekeninge (1)

$$\begin{aligned} y_f - y^e &= 980 - 870 \\ &= 110 \end{aligned}$$

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- e | Government spending can be used to reach full employment in the goods market
By how much should the government spending change?
Show your calculations and indicate the direction of the change in government spending (2)

- e | Owerheidsbesteding kan gebruik word om volle indiensneming in die goederemark te bereik Met hoeveel moet owerheidsbesteding verander?
Toon u berekening asook die rigting van verandering in owerheidsbesteding (2)

$$\Delta G = \frac{Y_F - Y_e}{\alpha}$$

$$= \frac{110}{5}$$

$$= 22$$

- || Taxes can be used to reach full employment in the goods market By how much should taxes change?
Show your calculations and indicate the direction of the change in taxes (2)

- || Belasting kan gebruik word om volle indiensneming in die goederemark te bereik Met hoeveel moet belasting verander? Toon u berekening asook die rigting van verandering in belasting (2)

$$\Delta T = \frac{Y_F - Y_e}{-\alpha \times C}$$

$$= \frac{110}{-5 \times 0.8}$$

$$= -27.5$$

- f Use the goods market model (axes below) to present the above economy graphically. Clearly indicate the following on the diagram,

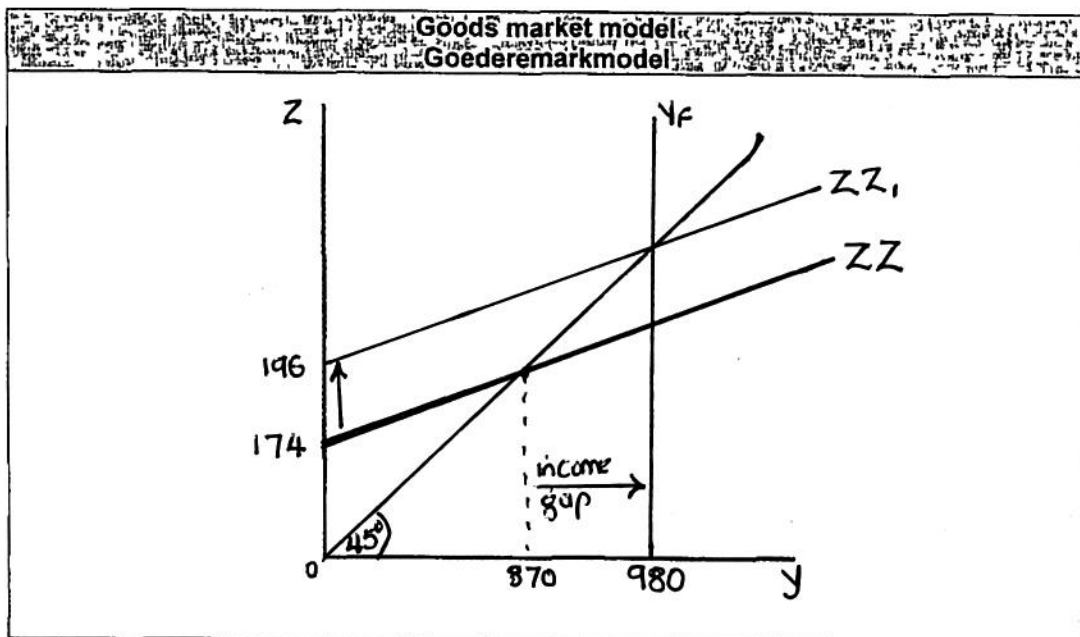
- current equilibrium level of output and income,
- full employment level of output and income,
- income gap (or unemployment gap),
- change in government spending and the change in taxes,
- initial autonomous spending and the change in autonomous spending

(5)

- f Gebruik die goederemarkmodel (asse hieronder) om die bostaande ekonomie grafies voor te stel. Toon duidelik die volgende op die diagram aan,

- huidige ewewigsproduksie- en -inkomepeil,
- volle indiensnemingspeil van produksie en inkome,
- inkomegaping (of werkloosheidsgaping),
- verandering in owerheidsbesteding en die verandering in belasting,
- aanvanklike outonome besteding en die verandering in outonome besteding

(5)

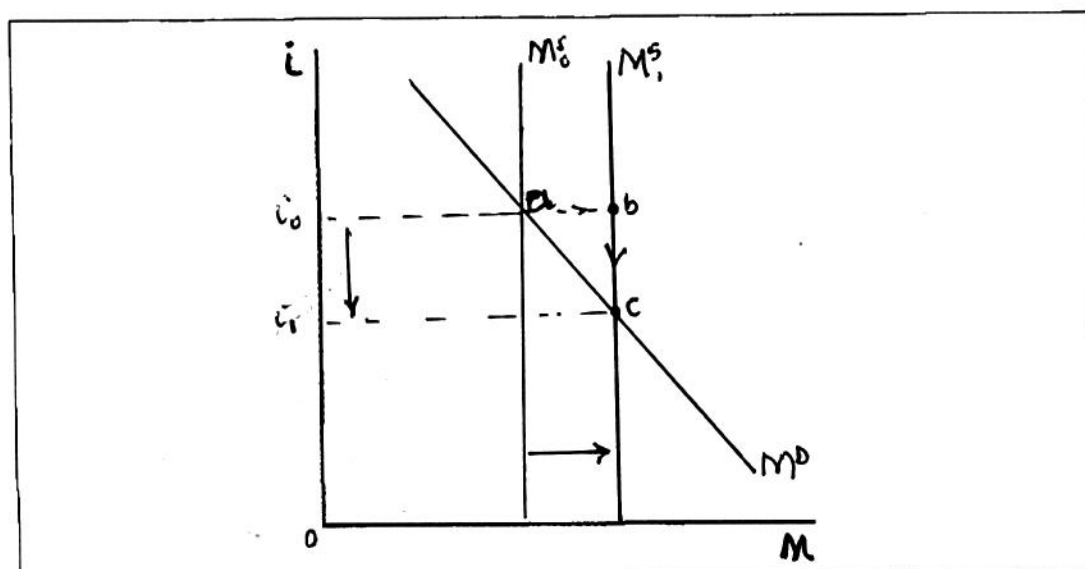
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QUESTION 2/VRAAG 2 (14 marks/14 punte)

Question 2 1/Vraag 2.1 (6 marks/6 punte)

Use the following diagram to illustrate and explain in words why an expansionary monetary policy causes a decrease in the interest rate in the financial market (6)

Gebruik die onderstaande diagram om te illustreer en te verduidelik in woorde waarom 'n ekspansionistiese monetêre beleid 'n daling in die rentekoers in die finansiële mark veroorsaak (6)



- An expansionary monetary policy results in higher supply of money.
- Money supply increase.
- at the existing interest rate (i_0); an excess supply of money exists.
- demand for bonds increase; this results in higher price for bonds and interest rates decrease.

CHAIN OF EVENTS : $M^s \uparrow \rightarrow S_b \downarrow \rightarrow P_b \uparrow \rightarrow i \downarrow$ (not asked for)

Question 2 2/Vraag 2.2 (8 marks/8 punte)

a Define a government budget deficit (1)

a Definieer 'n owerheidsbegrotingstekort (1)

• is a situation / condition where Government spending is greater than government revenue (taxation)

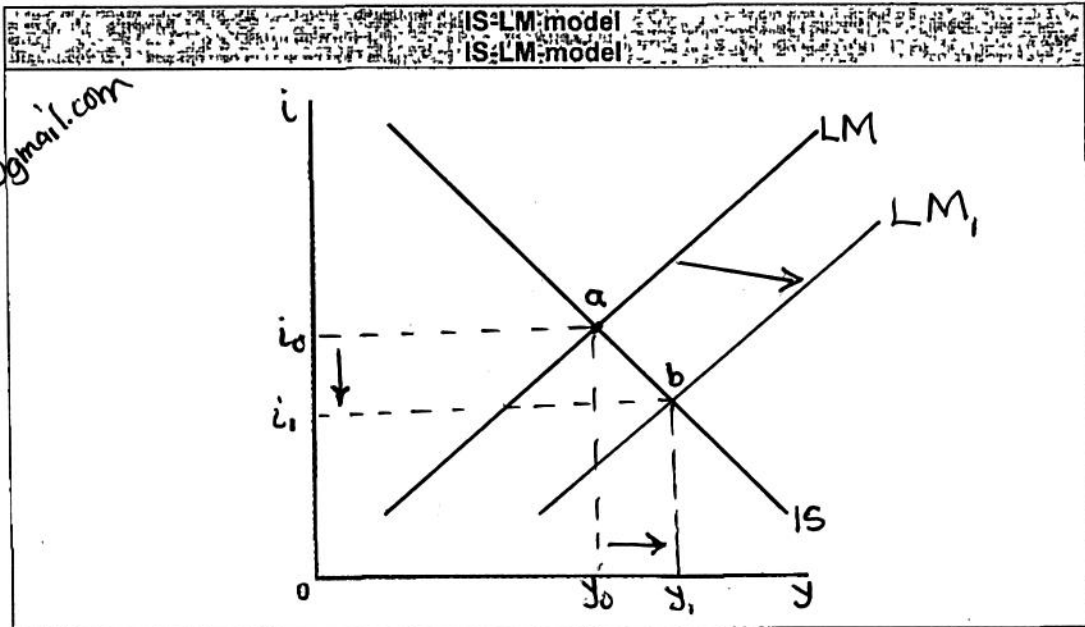
b Which stabilisation policy can be used to reduce a budget deficit? (1)

b Watter stabiliseringsbeleid kan gebruik word om 'n begrotingstekort te verminder? (1)

• Contractionary Fiscal policy

c Use the IS-LM model and chain of events (or words) to illustrate and explain how the negative impact of a budget deficit reduction on the level of output and income can be counteracted by monetary policy. Clearly indicate the variables measured on the axes below (6)

c Gebruik die IS-LM-model en gebeurteniskettings (of woorde) om te illustreer en te verduidelik hoe die negatiewe impak van 'n begrotingstekortvermindering op die produksie- en inkompeil teengewerk kan word deur monetêre beleid. Toon duidelik die veranderlikes wat gemeet word op die onderstaande asse (6)

Explanation/Verduideliking

- The effect of a contractionary fiscal policy on the level of output and income can be addressed by an expansionary monetary policy.
- The following chain of events explains the policy.

Expansionary Monetary Policy.Financial Market

$$M^s \uparrow \rightarrow \frac{M}{P} \uparrow \rightarrow i \downarrow$$

Goods Market

$$i \downarrow \rightarrow I \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow$$

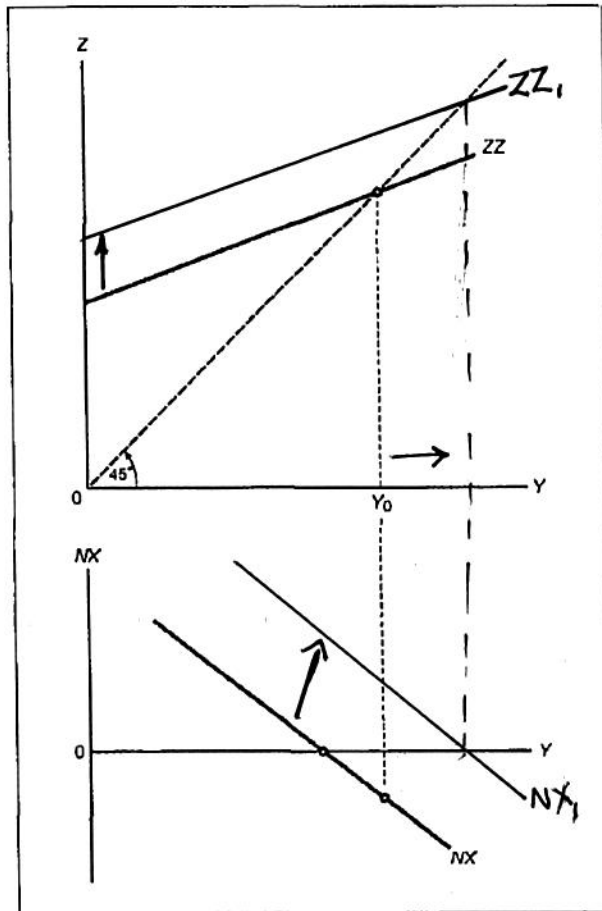
- The policy will leave the level of output and income higher

QUESTION 3/VRAAG 3 (13 marks/13 punte)**Question 3.1/Vraag 3.1 (7 marks/7 punte)**

- a Define a depreciation of the nominal exchange rate (1)
- a Definieer 'n depresiasie van die nominale wisselkoers (1)

• A decrease in the value of a currency.

- b Use the following diagram to show graphically (illustrate) and to explain the impact of a depreciation of the R/\$ exchange rate on the level of output and income and on the trade balance (6)
- b Gebruik die volgende diagram om die impak van 'n depresiasie van die R/\$ wisselkoers op die produksie- en inkomepeil en die handelsbalans grafies aan te toon (te illustreer) en te verduidelik (6)



Explanation/Verduideliking

Impact on level of output and income

Impact on trade balance

$E \downarrow \rightarrow X \uparrow \rightarrow NX \uparrow$;

$(X \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow \rightarrow IM \uparrow \rightarrow NX \downarrow)$ optional.

• Impact of exports on trade balance dominates the impact of imports, hence trade balance improves.

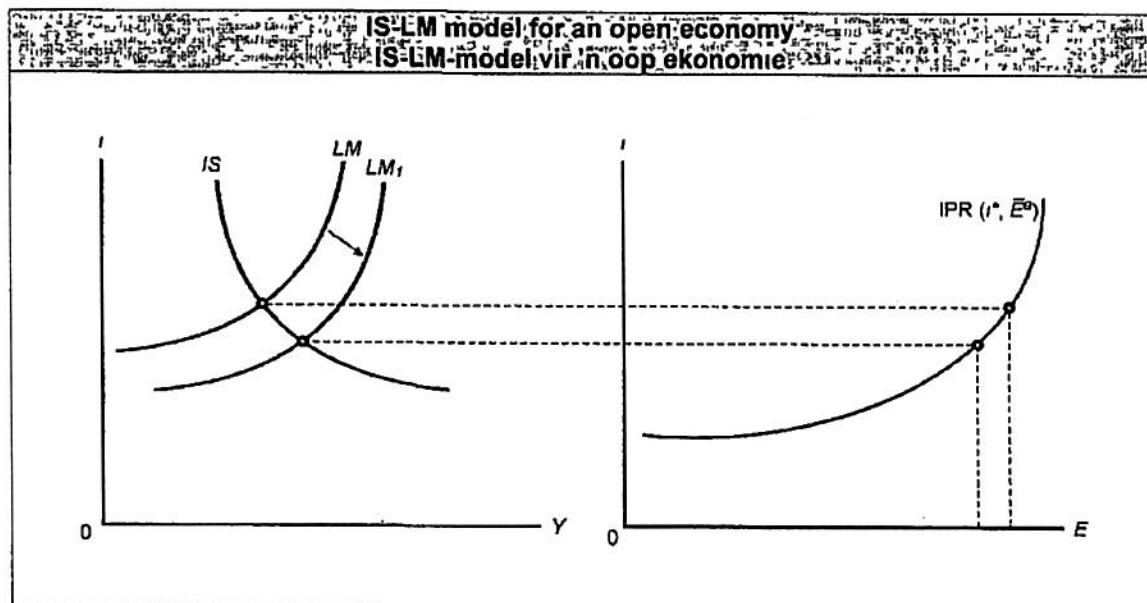
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Impact on level of output and income.
 $E \downarrow \rightarrow x \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow$

Question 3.2/Vraag 3.2 (6 marks/6 punte)

Study the following diagram which represents an IS-LM model for an open economy and answer the questions that follow

Bestudeer die onderstaande diagram wat die IS-LM-model vir 'n oop ekonomie verteenwoordig en beantwoord die vrae wat volg



- a What causes the shift of the LM curve in the above diagram? Clearly indicate the change in the direction of the factor (1)
- a Wat veroorsaak die verskuiving van die LM-kromme in die bostaande diagram? Toon duidelik die rigting van die verandering van die faktor aan (1)

Increase in money supply.

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[BLAAI OM]

- b Use the above diagram to explain the possible impact of the shift of the LM curve on the (i) interest rate, (ii) the financial account of the balance of payments, (iii) the exchange rate, (iv) the trade balance and (v) the level of output and income (5)
- b Gebruik die bostaande diagram om die moontlike impak te verduidelik van die verskuiving van die LM-kromme op die (i) rentekoers, (ii) die finansiële rekening van die betalingsbalans, (iii) die wisselkoers, (iv) die handelsbalans en (v) die produksie- en inkompeil (5)

Explanation/Verduideliking

Impact on

(i) Interest rate

$M^s \uparrow \rightarrow \frac{M}{P} \uparrow \rightarrow i \downarrow$

(ii) Financial Account of the Balance of Payments

$i \downarrow \rightarrow$ capital outflow

(iii) Exchange Rate.

capital outflow $\rightarrow E \downarrow$

(iv) Trade Balance

$E \downarrow \rightarrow X \uparrow \rightarrow NX \uparrow$ (improves)

(v) Level of output and income.

$X \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow$

OR

FINANCIAL MARKET

$M^s \uparrow \rightarrow \frac{M}{P} \uparrow \rightarrow i \downarrow$

GOODS MARKET

$i \downarrow \rightarrow I \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow$

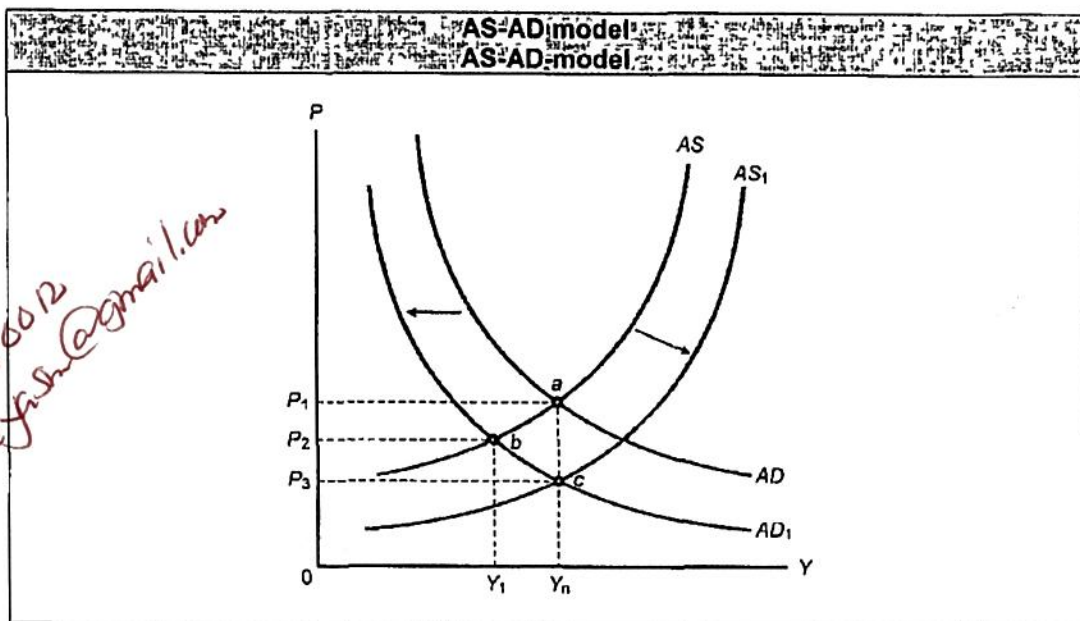
Exchange Rate and Trade Balance

$i \downarrow \rightarrow$ capital outflow $\rightarrow E \downarrow \rightarrow X \uparrow \rightarrow NX \uparrow$

QUESTION 4/VRAAG 4 (9 marks/9 punte)

Study the AS-AD model below and answer the questions that follow

Bestudeer die onderstaande AS-AD-model en beantwoord die vrae wat volg



- a List one factor that will shift the AD curve to AD_1 . Clearly indicate the change in the direction of the factor (1)
- a Lys een faktor wat die AD-kromme na AD_1 sal verskuif. Toon duidelik die rigting van die verandering van die faktor aan (1)

Any of the following

- Decrease in Government Spending
- Increase in taxation
- Decrease in money supply

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- b Identify the short run and the medium to long run equilibrium positions in the above diagram (2)
- b Identifiseer die korttermyn- en medium tot langtermyn ewewigposisies in die bostaande diagram (2)

Short-Run • a to b

Medium to Long Run • b to c

- c Study the movement from point a to point b. The changes in three variables are summarised in the table below. Explain the reason for the change in these variables (3)
- c Bestudeer die beweging van punt a na punt b. Die verandering in drie veranderlikes is opgesom in die onderstaande tabel. Verduidelik kortliks die rede vir die verandering in hierdie veranderlikes (3)

Variable/ Veranderlike	Change/ Verandering	Reason for the change/ Rede vir die verandering
Interest rate/ Rentekoers	decreases/ daal	• Due to a decrease in demand for money
Investment spending/ Investeringsbesteding	uncertain/ onseker	• An increase decrease • A decrease in interest rates with a simultaneous decrease in level of output and income.
Nominal wage/ Nominale loon	decreases/ daal	• increase in unemployment

- d Study the movement from point b to point c. The changes in three variables are summarised in the table below. Explain the reason for the change in these variables. (3)
- d Bestudeer die beweging van punt b na punt c. Die verandering in drie veranderlikes is opgesom in die onderstaande tabel. Verduidelik kortliks die rede vir die verandering in hierdie veranderlikes. (3)

Variable/ Veranderlike	Change/ Verandering	Reason for the change/ Rede vir die verandering
Interest rate/ Rentekoers	decreases/ daal	increase in real supply of money
Nominal wage/ Nominale loon	decreases/ daal	decrease in unemployment
Real money supply/ Reële geldvoorraad	increases/ styg	increase decrease in the price level.

SECTION B COMPULSORY (50 marks)

**THE ENGLISH VERSION OF THE MULTIPLE CHOICE QUESTIONS START ON PAGE 19
THE AFRIKAANS VERSION OF THE MULTIPLE CHOICE QUESTIONS START ON PAGE 27**

INSTRUCTIONS

In this section ALL questions must be answered on the mark reading sheet which is supplied
Carefully follow the instructions for the completion of a mark reading sheet.

- (i) Suppose a question reads as follows

An increase in the level of output

- 1 decreases the level of income in the economy
- 2 has no impact on the level of income in the economy
- 3 increases the level of income in the economy
- 4 causes firms to employ less factors of production

The correct answer is 3 You must therefore mark 3 on your mark reading sheet

- (ii) Only one of the alternatives per question – listed as 1, 2, etc – is correct You must therefore not mark more than one alternative per question
- (iii) For a correct answer you receive **2½ marks**. No marks are deducted for incorrect answers
- (iv) Section B consists of 20 questions and thus counts 50 marks out of the total of 100

Your mark reading sheet may get lost. You MUST therefore also write your answers to this section on page 26 of your examination answer book, for example 1(4); 2(3); 3(1); etc

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AFDELING B: VERPLIGTEND (50 punte)**DIE AFRIKAANSE MEERKEUSEVRAE BEGIN OP BLADSY 27****INSTRUKSIES**

In hierdie afdeling moet AL die vrae op die merkleesblad wat voorsien is, beantwoord word. **Volg die instruksies vir die voltooiing van 'n merkleesblad sorgvuldig.**

- (i) Veronderstel 'n vraag lees soos volg

'n Styging in die produksiepeil

- 1 verminder die inkompeil in die ekonomie
- 2 het geen invloed op die inkompeil in die ekonomie
- 3 verhoog die inkompeil in die ekonomie
- 4 veroorsaak dat firmas minder produksiefaktore in diens neem

Die korrekte antwoord is 3 U moet dus 3 op u merkleesblad merk

- (ii) Slegs een van die alternatiewe per vraag, gelys as 1, 2, ens is korrek U moet dus nie meer as een alternatief per vraag merk nie
- (iii) Vir 'n korrekte antwoord ontvang u 2½ punte Geen punte word vir verkeerde antwoorde afgetrek nie
- (iv) Afdeling B bestaan uit 20 vrae en tel dus 50 punte uit die totaal van 100

U merkleesblad mag wegraak. U MOET dus ook u antwoorde op hierdie afdeling op bladsy 34 in u eksamenantwoordboek neerskryf, byvoorbeeld 1(4), 2(3), 3(1), ens.

SECTION B. COMPULSORY (50 marks)

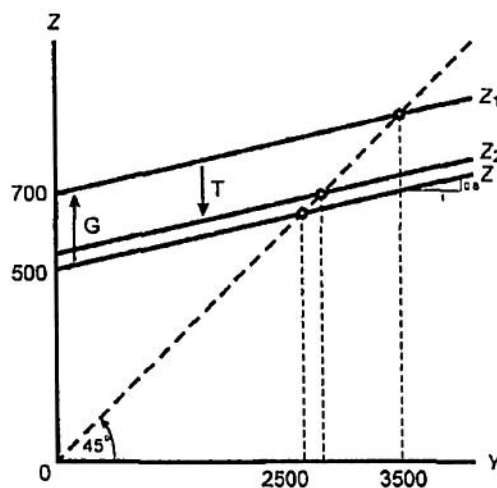
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1 Which of the following statements is/are correct?

- a The GDP is the total value of all final and ^Kintermediate goods and services produced within the boundaries of a country during a particular period
- b An increase in nominal GDP will always lead to an increase in real GDP ✗
- c Given a population growth rate of 3% per annum in South Africa, a real economic growth rate of between 2% and 3% is needed for the real GDP per capita to increase ✗
- d The so-called "jobless growth" refers to a situation where employment stays the same or even declines during periods of positive economic growth ✓

- 1 a, b, c and d
- 2 Only a, b and c
- 3 Only b and c
- 4 Only a and d
- 5 Only d

Question 2 refers to the following diagram which represents the balanced budget multiplier. Study the diagram and answer the following question



$$\begin{aligned} \Delta G &= 200 \\ \Delta T &= 200 \\ \Delta Y &= 200 \end{aligned}$$

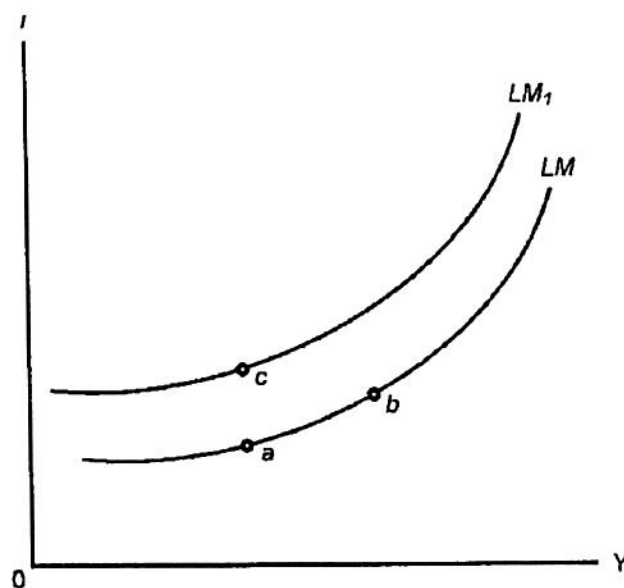
2 The net effect of the budget balanced on the level of output and income is

- 1 equal to 0 (zero)
- 2 an increase of 1 000
- 3 an increase of 200
- 4 an increase of 100
- 5 a decrease of 40

[TURN OVER]
[BLAAI OM]

- 3 Contractionary monetary policy involves the
- 1 selling of bonds by the central bank on the open market to increase the supply of money and the interest rate will decrease
 - ② selling of bonds by the central bank on the open market to decrease the supply of money and the interest rate will increase
 - 3 buying of bonds by the central bank on the open market to decrease the supply of money and the interest rate will increase
 - 4 buying of bonds by the central bank on the open market to increase the supply of money and the interest rate will decrease
- 4 The impact on the equilibrium interest rate of an increase in income with simultaneous expansionary open market operations by the central bank is
- 1 a lower equilibrium interest rate
 - 2 a higher equilibrium interest rate
 - ③ uncertain (the equilibrium interest rate can be higher, lower or the same)
- 5 An upward movement along the IS curve is the result of a(n)
- 1 increase in investment spending
 - 2 increase in government spending
 - 3 improvement in consumer confidence in the economy
 - ④ increase in the interest rate
 - 5 decrease in taxation

Study the following LM curve and answer question 6 that follows

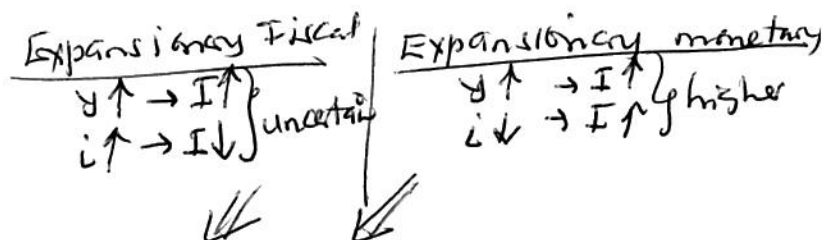


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6 Which of the following statements is/are correct?

- a At point a the demand for money is higher than at point b $\times$
- b At point c the money supply is higher than at point a $\times$
- c At point a, point b and point c the financial market is in equilibrium $\checkmark$

- 1 a, b and c
- 2 Only a
- 3 Only b
- 4 Only c
- 5 Only a and c



7 Comparing the impact in the IS-LM model for a closed economy of an expansionary monetary policy with an expansionary fiscal policy on investment spending the result is that

- 1 In both cases investment spending definitely increases
- 2 In the case of fiscal policy investment spending is indeterminate and in the case of monetary policy investment spending is higher
- 3 In both cases investment spending is indeterminate
- 4 In both cases investment spending is definitely lower
- 5 In the case of fiscal policy investment spending is higher and in the case of monetary policy investment spending is lower

8 Which one of the following combinations are endogenous variables in the IS-LM model?

- 1 The Y_D part of the consumption function and the marginal propensity to consume (c)
- 2 Autonomous investment spending ($\bar{I}$) and government spending (G)
- 3 The supply of money (M^s) and taxation (T)
- 4 The part of investment (I) that is dependent on income and the interest rate as well as the part of the demand for money (M^d) that is determined by the interest rate and the level of output and income

9 Given the following information

Interest rate on RSA bonds 7%
 Interest rate on USA bonds 3%

4% in favour of SA

Which one of the following statements is correct?

- 1 If the expected depreciation of the rand is more than 4% financial market participants will buy RSA bonds
- 2 If the expected depreciation of the rand is more than 4% financial market participants will buy USA bonds
- 3 If the expected depreciation of the rand is 5% financial market participants will be indifferent between RSA and USA bonds
- 4 If the expected appreciation of the rand is 5% financial market participants will buy USA bonds

10 An increase in the real exchange rate implies that

- a South African goods are relatively cheaper than the goods produced in the rest of the world
- b/ ✓ SA goods are relatively more expensive than the goods produced in the rest of the world
- c exports will increase
- d ✓ exports will decrease

- 1 a and c
- 2 b and c
- 3 a and d
- 4 ✓ b and d
- 5 Only d

11 Which of the following statements are correct?

Imports are a function of the

- a level of domestic output and income ✓
- b level of output and income of the trading partners
- c real wage
- d real exchange rate ✓

- 1 a, c and d
- 2 b, c and d
- 3 ✓ Only a and d
- 4 Only b and d
- 5 Only a and c

$$IM = f\left(\frac{E}{+}, \frac{Y}{+}\right)$$

$$X = f\left(\frac{E}{-}, \frac{Y^*}{+}\right)$$

$$NX = f\left(\frac{E}{-}, \frac{Y^*}{+}, \frac{Y}{-}\right)$$

12 Which one of the following statements is correct?

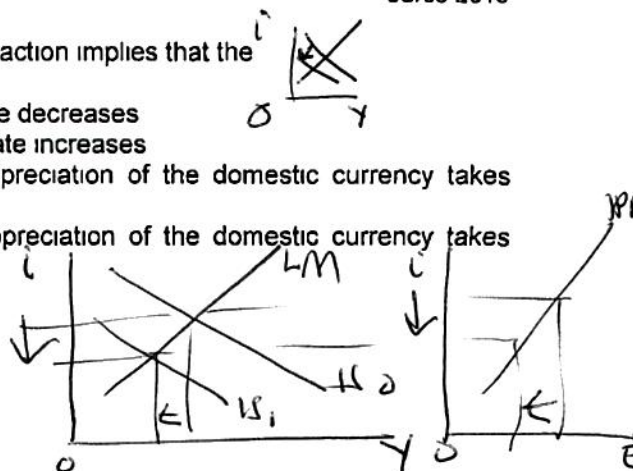
The impact of a decrease in domestic demand on the trade balance, for instance through a decrease in government spending, can be presented by the following chain of events

- 1 $G \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow \rightarrow IM \downarrow \rightarrow NX \downarrow$
- 2 ✓ $G \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow \rightarrow IM \downarrow \rightarrow NX \uparrow$
- 3 $G \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow \rightarrow X \downarrow \rightarrow NX \uparrow$
- 4 $G \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow \rightarrow X \uparrow \rightarrow NX \downarrow$
- 5 $G \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow \rightarrow IM \uparrow \rightarrow NX \downarrow$

13 In the IS-LM model for an open economy fiscal contraction implies that the

- a ✓ IS curve will shift to the left and the interest rate decreases
- b IS curve will shift to the right and the interest rate increases
- c ✓ nominal exchange rate decreases and a depreciation of the domestic currency takes place
- d nominal exchange rate increases and an appreciation of the domestic currency takes place

- 1 a and d
- 2 b and d
- 3 a and c
- 4 b and c

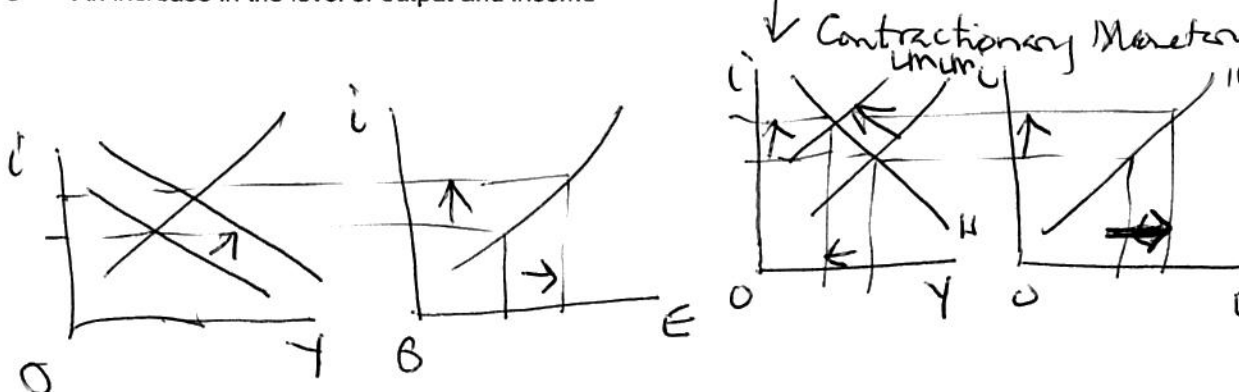


14 Comparing the impact of a contractionary monetary policy with an expansionary fiscal policy in the IS-LM model for an open economy on the exchange rate and trade deficit the results are that

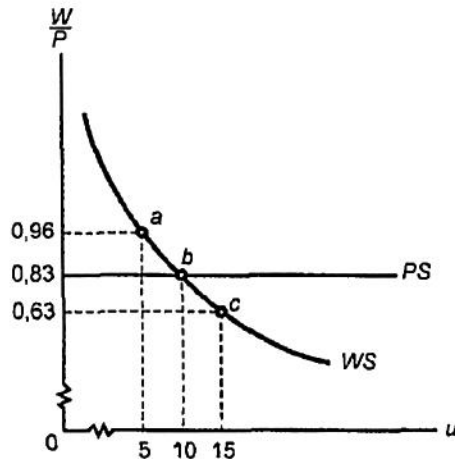
- 1 ~~in both cases the exchange rate appreciates and the trade deficit decreases~~
- 2 in both cases the exchange rate appreciates while the trade deficit for fiscal policy increases and for monetary policy it decreases
- 3 for fiscal policy the exchange rate depreciates and the trade deficit increases while for monetary policy the exchange rate appreciates and the trade deficit decreases
- 4 for fiscal policy the exchange rate appreciates and the trade deficit decreases while for monetary policy the exchange rate depreciates and the trade deficit increases
- 5 ✓ in both cases the exchange rate appreciates and the trade deficit increases ✓

15 Which factor will NOT increase the bargaining position of workers?

- 1 Better labour laws and regulations to protect the workers
- 2 Better unemployment benefits
- 3 ✓ Positive labour market conditions
- 4 Lower unemployment rate
- 5 An increase in the level of output and income



16 Which of the following statements are correct?



- a The bargained real wage at the natural rate of unemployment is 0.96 ✓
 - b At point a the bargained real wage is higher than the implied (or feasible) real wage ✓
 - c The implied real wage is lower than the bargained real wage at point c ✓
 - d The natural rate of unemployment will decrease if the bargaining power of workers were eroded by labour legislation ✓
 - e An increase in the markup of firms will shift the PS curve upwards
- 1 a and c
 - 2 a and d
 - 3 b, c and e
 - 4 Only b and d
 - 5 b, d and e

$$W = p^e F(y, z)$$

17 In the determination of nominal wages (W) in the labour market

- 1 a change in institutional factors will have no influence on nominal wage demands
- 2 a decrease in the expected price level, will increase nominal wage demands
- 3 better unemployment benefits will decrease nominal wage demands
- 4 a higher unemployment rate, will decrease nominal wage demands

18 According to the price-setting relation which one of the following will increase the price per unit?

- 1 An increase in the unemployment rate
- 2 An increase in the markup of firms
- 3 An increase in the expected price level
- 4 An increase in the output and income level

$$P = W(1 + m)$$

- 19 An upward shift of the aggregate supply curve (AS curve) can be presented by the chain of events as follows

- 1 $G \uparrow \rightarrow Z \uparrow \rightarrow Y \uparrow$
- 2 $P \uparrow \rightarrow (M/P) \downarrow \rightarrow I \uparrow \rightarrow I \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow$
- 3 $M \downarrow \rightarrow (M/P) \downarrow \rightarrow I \uparrow \rightarrow I \downarrow \rightarrow Z \downarrow \rightarrow Y \downarrow$
- 4 $P^e \uparrow \rightarrow W \uparrow \rightarrow P \uparrow$

only expected price level shifts AS upward of all variables listed here.

- 20 Which of the following statements are correct?

- a To derive the IS curve the interest rate changes in the goods market ✓
- b To derive the LM curve the demand for money changes to give a picture of what happens in the financial market ✓
- c The AD curve gives a picture of what happens in the goods market, the financial market and the labour market when the price level changes ✓
- d The AS relation captures the effects of output and income on the price level and is derived from the wage-setting relation and price-setting relation in the labour market ✓

- 1 a, b, c and d
- 2 Only a and b
- 3 Only a, c and d
- 4 Only a, b and d
- 5 Only a and d

The following two questions are for information purposes and do not count for any marks We will appreciate it if you answer the questions

- 21 Did you make use of the CDROM for this module?

- 1 I did not receive it
- 2 I was not able to use it
- 3 I did not use it at all
- 4 I did not use it much
- 5 I used it extensively