edge
Business School

Exam Course

LECTURER:

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MODULE:

ECS 2602

DATE:

2014

Integrity • Responsibility • Passion • Community • Legacy

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Oct 2013 Exam solutions

Question 1.

Distinguish between financial investment and real investment (2)

Financial investment is investment in shares and other financial instruments with the hope of earning a return normally related to the interest rate, whereas real investment is spending on additions to the capital stock (machinery, buildings , inventories etc).

Question 2

Briefly describe the impact an increase in the interest rate has on the demand for money curve. (2)

An increase in the interest rate will cause a decrease in the demand for money. This is reflected by an upward movement along the demand for money curve.

Question 3

$\frac{1}{1-c(1-t)+m}$

Briefly explain why the multiplier is smaller for an open economy than a closed economy. (2)

Multiplier is made up of the mpc (marginal propensity to consume) and the t (tax rate) in a closed economy. In an open economy the multiplier is made up of the mpc, t and the mpl (marginal propensity to import) . Note that imports is a withdrawal in the circular flow model, therefore any money that is spent on imports, leaves the economy and thus will not be multiplied by the multiplier. Thus the effect of the multiplier is smaller in an open economy than in a closed economy

Question 4

$\downarrow \varepsilon = \frac{\downarrow EO}{P^*}\downarrow\uparrow$

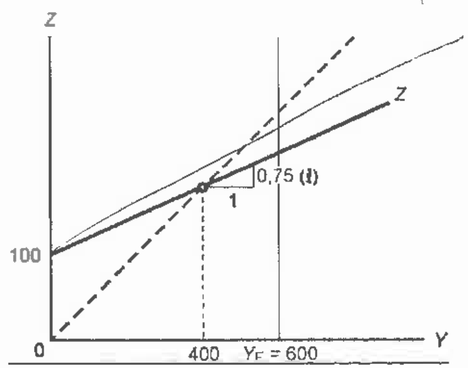
Name two factors that will cause a decrease in the real exchange rate. (2)

The real exchange rate will decrease when:

- Foreign prices increase (assuming the domestic prices and nominal exchange rate remain constant)
- Domestic prices decrease(assuming foreign prices and the nominal exchange rate remain constant)

Question 5

Use the following goods market model to explain how government spending can be used to ensure full employment. Comment on the size of government spending needed to reach full employment.(6)



$\frac{1}{1-0,75}$

i. **Explanations and calculations (5)**

This can be done by an expansionary fiscal policy. This means that government spending must increase.

We need to calculate the multiplier 1st

- $\propto = \frac{1}{1-\text{mpc}}$ note that the mpc =3/4 or 0.75
- $\propto = \frac{1}{1-0.75}$ = 4 ✓

Then we must calculate amount government spending must increase by:

- $\Delta\, autononous\ spending = \frac{\Delta Y}{\propto}(Yf - Ye)$
- $\Delta\, autononous\ spending = \frac{600-400}{4}$ = 50 ✓

From the above calculation we can deduce that

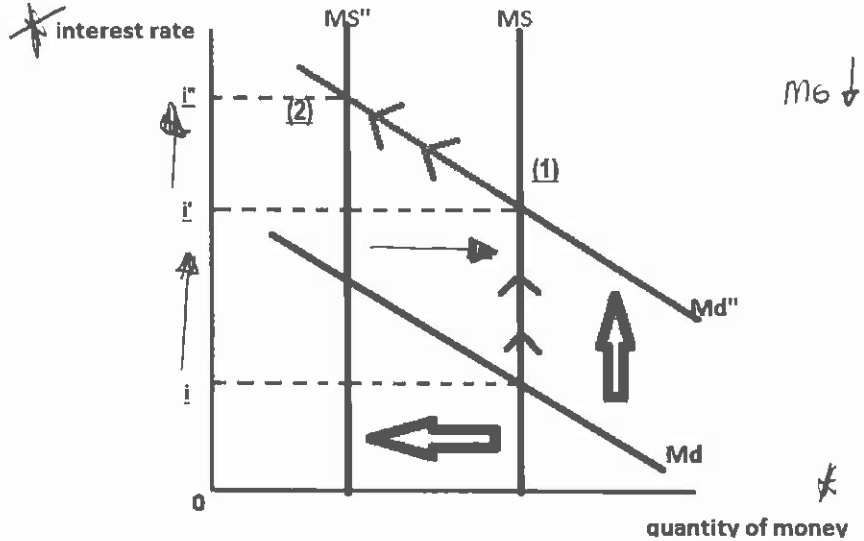
- If government spending were to increase by 50, through the multiplier (4) effect, will lead to an increase in the aggregate demand for goods and services and eventually the level of output (production, income and spending) by (50 x 4 = 200).

ii. **Name one other fiscal policy instrument to ensure full employment. Indicate the direction of change. (1)**

Another fiscal policy instrument that could yield similar results would be. A reduction in tax rate. This will be indicated by a swivel of the zz curve upwards.

Question 6

Use the financial market model to explain what happens to the interest rate if income increases and the money supply decreases. (6)



Mo ↓ i ↑

According to the diagram.

- An increase in income will lead to an increase in the demand for money and subsequently leading to an increase in the level of interest rates.(from i to i')
  (This is reflected by an upward (rightward) shift of Md to Md" and a movement along the MS curve)
  Taking us to point (1)
- The decrease in Money supply will reduce the purchasing power (real money supply) and inevitably increasing the level of interest rates (further from I' to I'')
  (This is reflected by a leftward shift of the money supply from MS to MS")
- It must be noted that real money supply will also decrease.

Overall effect on the interest rate

- The interest rate level will increase twice.

workers

Question 7

7.1 Identify the factors that impact on the targeted nominal wage in the wage setting relationship. Clearly indicate the relationship between the factors and the targeted nominal wage. (4)

These factors influence the bargaining position of workers and therefore the targeted nominal wage demands:

- (+) Expected price level (P^e) – if workers expect price of goods they buy to double, they will ask for a doubling of their nominal wage to protect their purchasing power.
- (-) Unemployment rate (u) – higher unemployment rate lowers workers bargaining power (now easily replaced), forcing them to accept a lower wage
- (+) Institutional factors (z):
  - unemployment insurance or benefits to workers who lose their jobs (at a given unemployment rate, higher unemployment benefits increase the wages)
  - minimum wages (an increase in minimum wages will increase nominal wages at a given unemployment rate)
  - labour laws and regulations that protect employment (more protection will increase the bargaining position of workers and there will be a rise in wages at a given unemployment rate)
  - collective bargaining

7.2 Briefly explain why it is not possible for labour to increase the price determined real wage through nominal wage bargaining. (3)

Firm

Nominal

The wage-setting relationship does not tell us what the actual real wage will be. Workers can try to achieve a desired or targeted real wage by bargaining for a nominal wage, but whether the desired or targeted real wage is achieved will depend on what happens to the price level.

$P = (1+\mu)W$

Firm

And the price level is determined by the mark-up used by firms.

This implies that whatever the level of nominal wages, the price of the products produced will always be a certain percentage (as determined by the mark-up) higher than the wages paid to workers.

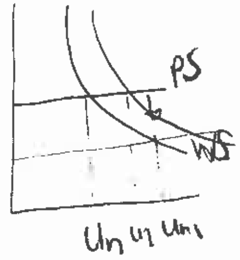
The implication of this particular model of the labour market is that there are only two ways in which labour can obtain a higher real wage:

- If firms decrease their mark-up. This causes a lower price level, and for a given nominal wage, a higher real wage. This is referred to as the battle for the mark-ups.

- If productivity increases. If more goods are produced per unit of labour then more goods are available to be divided between firms and labour.

7.3 Identify three factors that will increase the natural rate of unemployment. (3)

- increase in unemployment benefits
- increase in minimum wages
- Labour laws and relations to protect employment
- Increase in the firms mark-up



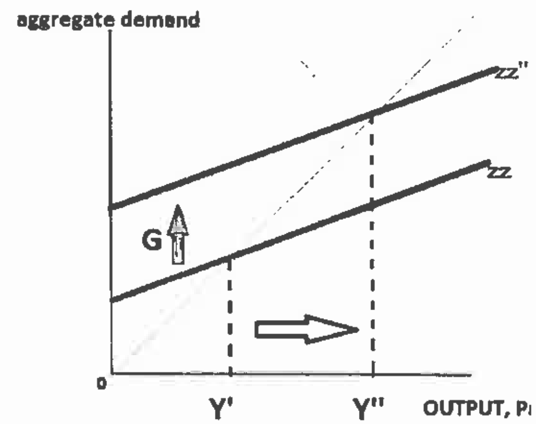
SECTION B: Choice questions (30 marks)

Question 1(15 marks)

a. Explain and illustrate by using two different diagrams the impact of an expansionary fiscal policy in:

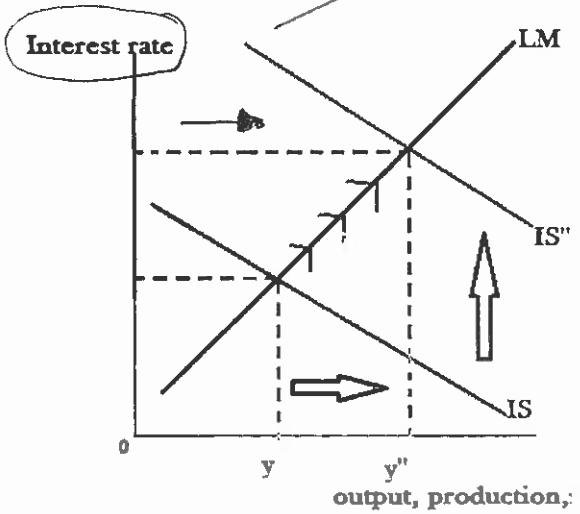
G↑ T↓
Y↑

i. The goods market model. (3)



ii The IS-LM model. (4)

Inflation



iii. Compare the results in (i) and (ii) above. (2)

- Diagram i) shows us activities in the goods market. An expansionary fiscal policy will create the ZZ curve to shift upwards (zz to zz'').
- Diagram ii) shows us an IS/LM model. The above-mentioned policy will shift the IS curve upwards (IS to IS'')and create an upward movement along the LM curve as well as causing an increase in the interest rate.

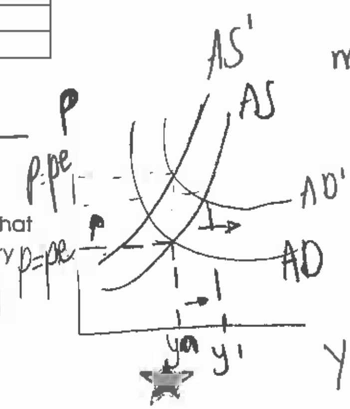
b. List three nominal and three real variables in the AS-AD model. (3)

Nominal Variable	Real Variable
Price level (P)	Employment
Nominal Wages (W)	Output (Y)
Nominal money supply (M^s)	Real money supply (M/P)
	Interest rate (i)
	Investment spending (I)
	Demand for goods (Z)
	Real wage (W/P)

c. Briefly explain the meaning of the concept "neutrality of money". (3)

Neutrality of money means that monetary policy (money) is neutral in the medium/ long run. The notion behind this is that the real variables remain unchanged (increase and decrease - return to their original values) and that it is only the nominal values that change. Therefore expansionary monetary policy only influences nominal variables (they are higher).

Inflation



Nominal variables

- Prices
- Wages

Real variables

- Output (production, income and spending)
- Employment
- Real money supply (M/P)
- Interest rate (i)
- Investment spending (I)
- Demand for goods (Z)
- Real wage (W/P)

Question 2 (15 marks)

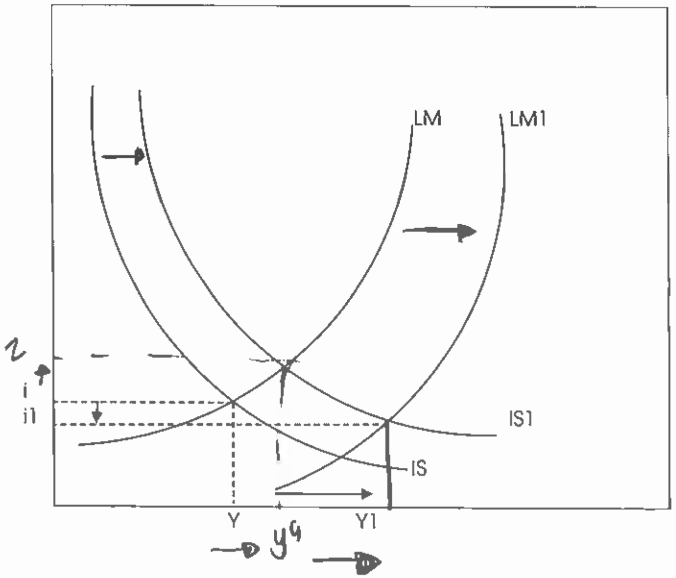
a. During the recession in 2009 the level of output and income declined in the South African economy.

Fiscal - ↑G ↓T

i. Use the IS-LM model to explain how stabilisation policies were used during the recession to increase the level of output and income. (6)

Monetary Ms↑ i↓

ms↑ i↓



/2 graphs

b. Use the IS-LM model for an open economy to explain the possible impact of a decrease in government spending on the.... (9) contractionary fiscal

using a chain of events to explain this concept first:

G↓ - Z↓ - Y↓ - C↓ - I↓ - this occurs in the goods market ✓

Y↓ - Md↓ - i↓ - this occurs in the financial market

i↓ - E↓ - X↑ - NX↑ - impact on the exchange rate and trade balance

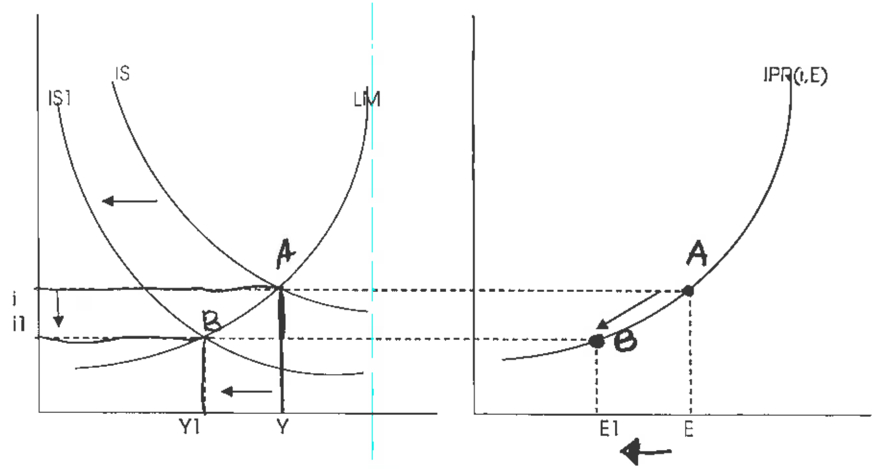
i) **interest rate**
The level of interest will decrease because the reduction in output will cause a decrease in the demand for money and subsequently interest rates.

ii) **the level of output and income,**
A decrease in government spending will cause a decrease in the aggregate demand for goods, of which (through the multiplier effect) will lead to a decrease in the level of output and income.

iii) **the financial account of the balance of payments,**
Reference to the Investment relation must be made here.
i.e. I = *f* (i,Y) .
- reduction in output will lead to a reduction in investment spending (positive relation) - (Y↓ - I↓)
- the decrease in interest rates will however lead to an increase in investment (negative relation) .
- therefore the overall effect on Investment spending is uncertain as we do not know which effect dominates.

iv) **the exchange rate and**
The decrease in the Interest rates will lead to a depreciation of exchange rate (interest parity condition)

v) **the trade balance.**
The trade balance is most likely to improve, given the above-mentioned interest parity condition and the "Marshal-Lerner condition)

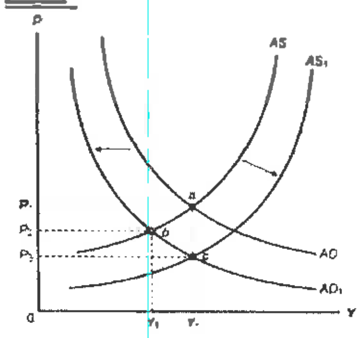


Question 3 (15 marks)

ms ↓ i ↑

a. **Use the AS-AD model to explain the impact of a contractionary monetary policy on the level of investment in the medium to long run. (6)**

Impact of a contractionary monetary policy



1

- **Financial markets**

Ms ↓ - Ms/P↓ - interest rate ↑

A contractionary monetary policy will lead to an increase in the level of interest rates, because of the reduction in the nominal and real money supply.

2

- Goods market

Interest rates ↑ - investment ↓ - Z ↓ - Y↓

The increase in the interest rates will lead to a decrease in investments through the multiplier effect this will lead to a greater decrease in aggregate demand for goods and ultimately in output.

3

- **Labour market**

Y ↓ - employment N ↓ - **unemployment u ↑ - wages ↓ - prices ↓**

- Expectations

Pe (expected prices) ↓- We wage expectations ↓ - P (actual prices)↓

- **Financial market**

P ↓ - Ms/P↑ - interest rates ↓

- **Goods market**

Investments ↑ - aggregate demand ↑ - output ↑

From the above chain of events one can deduce that initially a contractionary monetary policy lead to a decrease in level of the prevailing interest rates, this will lead to a **decrease in investment spending** in the short run.

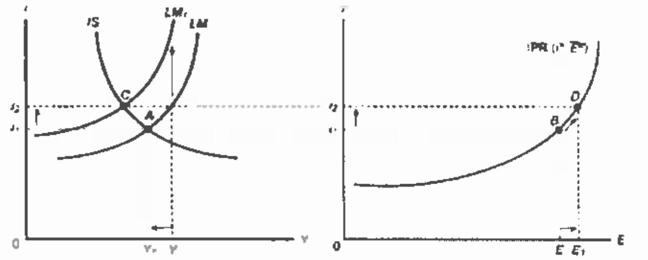
In the long term, expectations come into play and through successive chain of events this leads to an increase in the level of interest rates, subsequently inducing **investments to increase** in the long run.

This phenomenon lends its self to the **neutrality of money concept.** In essence investment spending remains the same or (indeterminate)

b. Use the IS-LM model for an open economy **to** explain **the** impact **of** contractionary monetary policy **on** the financial market, the goods **market, the financial account of the balance of payments, the exchange rate and the trade balance. (9)**

Ms↓ ↑P

M↓ ⇒ E↑ : appreciation



(IM, Y, E)

1

- **Financial markets**

Ms ↓ - Ms/P↓ - interest rate ↑

A contractionary monetary policy will lead to an increase in the level of interest rates, because of the reduction in the nominal and real money supply.

2

- **Goods market**

Interest rates ↑ - **investment ↓ - Z ↓ - Y↓**

The increase in the interest rates will lead to a decrease in investments . Through the multiplier effect this will lead to a greater decrease in aggregate demand for goods and ultimately in output.

3

- **Financial account of the balance of payment**

Given the reduction in investments, the financial account is most likely to decrease.

4

- Exchange rate

Interest rates hikes will lead to an appreciation of the nominal exchange rate, this can be explained by the interest parity condition (positive relation between the interest rates and exchange rates)

- **Trade balance**

Given the appreciation of the exchange rate and the Marshal Lerner condition, the trade balance will deteriorate or worsen.

Exports ↓

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Section C: MCQ

1 Which of the following statements are correct?

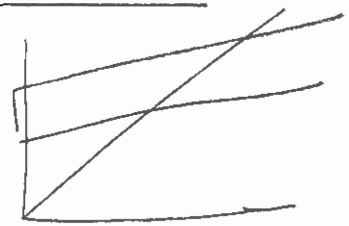
a The GDP is the total value of all final and intermediate goods and services produced within the boundaries of a country during a particular period ✗
b Nominal GDP is valued at current prices while real GDP is valued at prices in a base year ✓
c Given a population growth rate of 2 5% per annum in South Africa, a real economic growth rate of between 2% and 2 5% is needed for the real GDP per capita to increase ✗ ↑2,5%
d A considerable rise in meat prices can be considered as inflation ✗
e The so-called 'jobless growth' refers to a situation where employment declines even during periods of positive economic growth ✓

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

2 Which of the following will shift the demand curve upwards in the goods market to indicate an increase in autonomous spending?

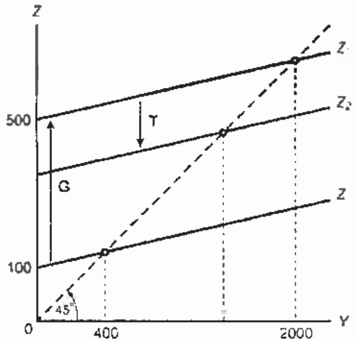
a An increase in taxation ✗
b A decrease in taxation ✗
c An increase in the marginal propensity to consume ✗
d An increase in autonomous investment

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



Question 3 refers to the following diagram which represents the balanced budget multiplier The marginal propensity to consume is 0 75 (¾) Study the diagram and answer the following question

$m = 4$ ↑
$G = 400$ ↑
$T = 400$ ↑



$G\uparrow\ Y\uparrow\ 400 \times 4 = 1600$

$T\uparrow\ Y\downarrow = 0{,}75(400) \times 4$

$= 1200$

↑ 400

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

1 equal to 0 (zero)
2 an increase of 1 600
3 an increase of 400
4 an increase of 100
5 a decrease of 100

Question 4 is based on the following information

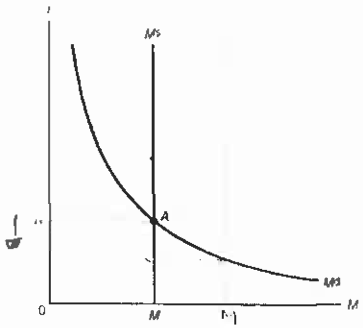
Government spending	=	120
Taxation	=	90
Exports	=	250
Imports	=	300
Capital inflows	=	70
Capital outflows	=	30

Deficit = 30
Trade = -50
Finance +40

4 Which one of the following statements is correct?

1 The budget surplus is 30, the trade surplus is 50 and the balance on the financial account is - 40
2 The budget deficit is 30 the trade deficit is 50 and the balance on the financial account is -40
3 The budget deficit is 50 the trade deficit is 30 and the balance on the financial account is 40
4 The budget deficit is 30 the trade deficit is 50 and the balance on the financial account is 40 ✓

Question 5 is based on the following diagram



5 Which of the following statements is/are correct?

a If the interest rate is higher than i_1 then an excess supply of money exists and financial market participants will buy bonds to move back to equilibrium ✓
b If the interest rate is higher than i_1 then an excess demand for money exists and financial market participants will sell bonds to move back to equilibrium ✗
c If the central bank wishes to decrease the interest rate in the economy it should buy bonds on the open market and the M^s curve shifts to the right ✓
d If the central bank wishes to decrease the interest rate in the economy it should sell bonds on the open market and the M^s curve shifts to the right ✗

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

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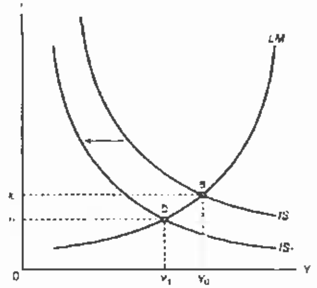
6 Which of the following can be regarded as endogenous variables in the IS-LM model?

a Nominal money supply
b Level of output and income
c Consumption spending
d Government spending

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

Question 7 is based on the following diagram



contractionary G↓ T↑
fiscal

7 Which of the following factors will cause a shift from IS to IS_1?

a A decrease in investment spending due to an increase in the interest rate
b A decrease in autonomous consumption spending
c A decrease in government spending
d An increase in taxation
e A decrease in the nominal money supply

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

8 Given the following information

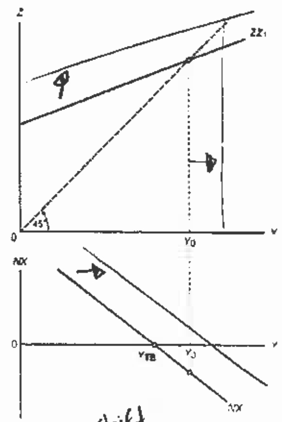
2%

Interest rate on RSA bonds 6%
Interest rate on USA bonds 4%

Which one of the following statements is correct?

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

Questions 9 and 10 are based on the following diagram



shift

E↓ X↑

9 An increase in exports will lead to a

1 movement along the NX curve
2 downward shift of the demand curve (ZZ_1 curve)
3 shift of the NX curve to the right
4 deterioration of the trade balance

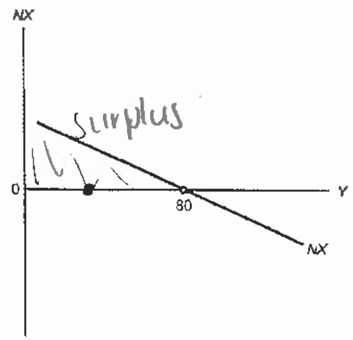
10 Given goods market equilibrium in the above diagram, what would the likely impact of a depreciation of the domestic currency be?

a The ZZ_1 curve will shift upwards
b The ZZ_1 curve will shift downwards
c The domestic level of output will increase and there will be a higher trade deficit
d The domestic level of output will increase and there will be a lower trade deficit
e The domestic level of output will decrease and there will be a trade balance

marshall

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

Question 11 is based on the following diagram



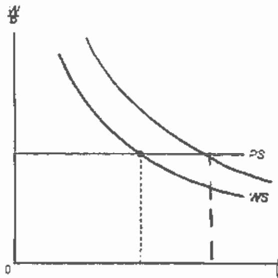
11 At any income level lower than R80 million a trade surplus occurs because if

1 $Y\uparrow \rightarrow IM\uparrow \rightarrow NX\downarrow$
2 $Y\downarrow \rightarrow IM\downarrow \rightarrow NX\downarrow$
3 $Y\uparrow \rightarrow X\uparrow \rightarrow NX\downarrow$
4 $Y\downarrow \rightarrow X\uparrow \rightarrow NX\uparrow$
5 $Y\downarrow \rightarrow IM\downarrow \rightarrow NX\uparrow$

12 According to the interest-parity condition

1 a lower domestic interest rate leads to a depreciation of the nominal exchange rate and a deterioration of the trade balance ✗
2 a higher domestic interest rate leads to an appreciation of the nominal exchange rate and a deterioration of the trade balance ✓
3 an appreciation of the nominal exchange rate leads to a higher interest rate and a deterioration of the trade balance
4 a depreciation of the nominal exchange rate leads to a lower interest rate and an improvement of the trade balance

Question 13 is based on the following diagram



WS

movement

↑ Bargain

13 Which one of the following factors will cause a rightward shift of the wage-setting curve?

1 An increase in the bargaining position of workers resulting from a decrease in the unemployment rate ↑
2 An increase in the bargaining position of workers due to labour legislation
3 An increase in the mark-up by firms
4 An increase in the level of output and income

pg 166

14 The derivation of the AD curve can be presented by the following chain of events

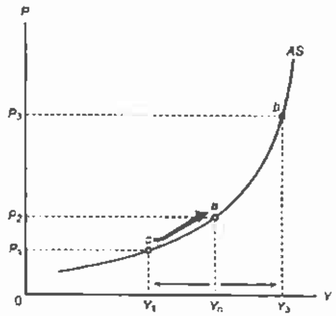
1 $M\downarrow \rightarrow (M/P)\downarrow \rightarrow i\uparrow \rightarrow I\downarrow \rightarrow Z\downarrow \rightarrow Y\downarrow$
2 $P\uparrow \rightarrow (M/P)\downarrow \rightarrow i\uparrow \rightarrow I\downarrow \rightarrow Z\downarrow \rightarrow Y\downarrow$
3 $G\uparrow \rightarrow Z\uparrow \rightarrow Y\uparrow \rightarrow M^d\uparrow \rightarrow i\uparrow$
4 $T\uparrow \rightarrow Z\downarrow \rightarrow Y\downarrow \rightarrow M^d\downarrow \rightarrow i\downarrow$

15 Which of the following statements are correct?

a The IS curve gives a picture of what happens in the goods market when the interest rate changes ✓
b The LM curve gives a picture of what happens in the financial market when the level of output and income changes ✓
c The AD curve gives a picture of what happens in the goods market and financial 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 b, c and d
3 Only a, c and d
4 Only a, b and c
5 Only a and b

Question 16 is based on the following AS curve



16 A movement from point c to point b indicates that the

a nominal wage is unchanged ✗
b real wage increases ✗
c unemployment rate decreases ✓
d expected price level is higher ✗
e actual price is higher ✓

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

Oct 2013 Multiple choice solutions

Q1 - 4	Q6 – 2	Q11 - 5
Q2 – 3	Q7 – 3	Q12 – 2
Q3 – 3	Q8 – 2	Q13 – 2
Q4 – 4	Q9 – 3	Q14 – 2
Q5 - 1	Q10 - 4	Q15 – 1
		Q16 - 5

Exam Solutions Oct 2012

Section A

1. **Give two examples of stabilisation policies that can be used in an economic recession to increase the level of output and income (2)**

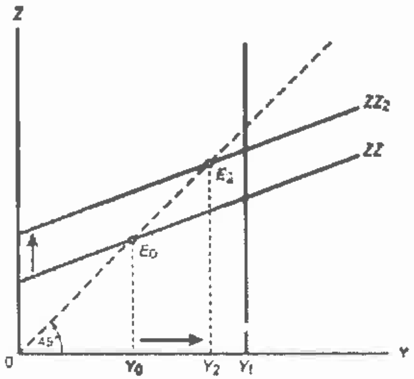
   Expansionary monetary policy and expansionary fiscal policy

2. **Distinguish between induced consumption and autonomous consumption (2)**

   Autonomous consumption - consumption spending by households that is independent of income.
   Induced consumption - consumption spending by households that is caused by or dependent upon income. There is a positive relationship between induced consumption and the level of income.

3. **Use the goods market model to explain the impact of an increase in government spending of a 100 and an increase in taxation of 100 on the equilibrium level of income. Show your calculations. (2)**

Balanced Budget



In the original equilibrium, we have the following: c = 0.8, c0 = 200, G = 0, T =0 and Y0 = 1000 (equilibrium output and income)
Hence the demand for goods function $Z = (c0 + \bar{I} + G - cT) + cY$ is

$$Z_0 = 200 + 0.8(1000) = 1000$$

After including the increase in taxes and government expenditure:

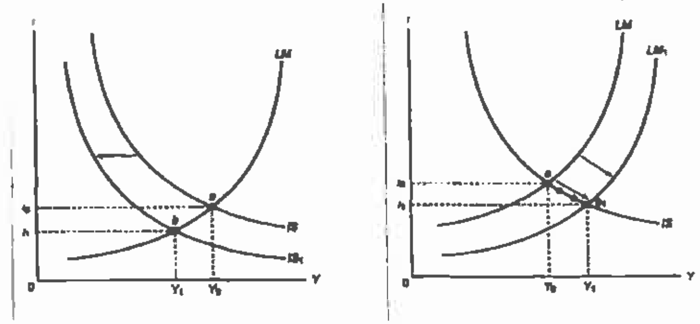
$$Z_1 = 200 + 100 - 0.8(100) + 0.8(1100) = 1100$$

While an increase in government spending initially increases output and income by 100 an increase in taxes of 100 does not initially decrease output and income by 100 but indirectly (through the consumption function) by c x 100.

The following example illustrates this expansionary effect.
Assume that c = 0.8 and that G increases by 100 and T increases by 100.
The value of the multiplier is 5.

An increase of 100 in government spending increases Y by 100 x 5 = 500
An increase of 100 in taxes decreases Y by 0.8(100) x 5 = 400
The net effect is an increase of 100 in output and income.

4. **Diagram A: Contractionary fiscal** **Diagram B:Expansionary Monetary**



In both cases the interest rate is lower. Explain the reason for this decline. (2)
Also explain the impact of these policies on investment spending (3)

Contractionary fiscal policy is aimed at "cooling down" the economy. The decline in the level of output reduces the demand for money because there is a lower level of transactions. The decrease in the demand for money leads to a decline in the interest rate in the financial market. The decline in the interest rate increases investment spending because investment spending is a negative function of the interest rate
Expansionary monetary policy is an increase in the nominal money supply in order to stimulate economic activity by increasing the demand for goods. The increase in the nominal money supply, which increases the real money supply, causes the interest rate to decline. The decrease in the interest rate increases investment spending, the demand for goods and the level of output and income.

ECS 2602
Exam Course
Shannon Perry
2014

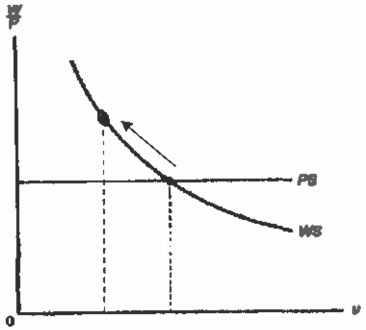
$\epsilon \downarrow \; X \uparrow \; Y \uparrow \; NX \uparrow$

5. Explain the impact of a depreciation of the exchange rate on the level of output and income and the trade balance. (4)

Given that the Marshall-Lerner condition holds, a **depreciation** results in an improvement in the trade balance and the level of output and income. The level of output and income increases since the demand for domestic goods increases in the economy. The increase in the demand for domestic goods is the result of a rise in exports, which increases the demand for goods and the level of output.

6. Use the labour market diagrams to show graphically the impact of the following:

a. Increase in the level of output and income (2)



Y↑→ N↑ → u↓→ W↑
As a result there is an upward movement along the WS curve and the bargained wage will be higher than the implied wage.

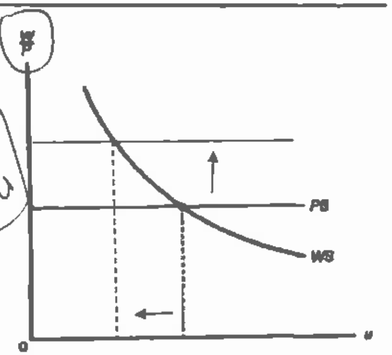
b. Decrease in the mark-up by firms (2)

$P = (1+\mu)W$

$\frac{W}{P} = \frac{1}{1+\mu}$

Real wage –

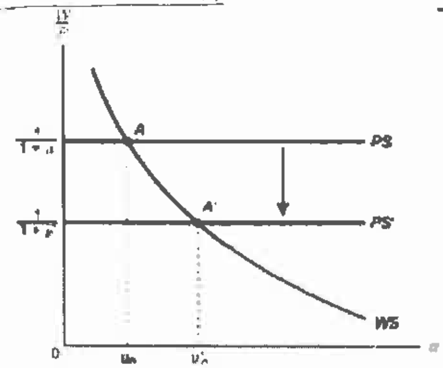
$\frac{1}{1+\mu}$



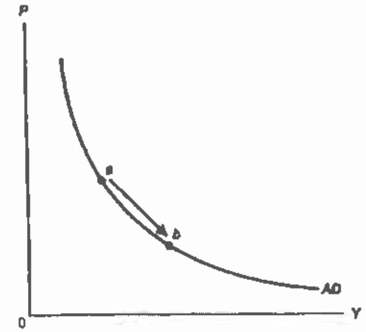
oil price ↑

c. A supply shock (2)

(Similar to an increase in the mark-up)



7. Given the following AD curve, explain what happens to the following variables during a downward movement from point a to b.....(5)



a. **Nominal money supply**
b. **Real money supply**
c. **Interest rate**
d. **Investment**
e. **Level of output and income**

A movement along the AD curve is caused by a change in the price level.
As workers revise their price expectations downwards, they decrease their nominal wage demands. Firms react to this decrease in the nominal wages by decreasing the prices of goods and services. This

decrease in the **price level**, however, affects the financial market, where a decrease in the price level increases the **real money supply**, which in turn causes a decrease in the **interest rate** and an increase in **investment spending**, which increases the demand for goods and the **level of output** increases. **Nominal money supply** is unchanged since the reserve bank has made no change to it.

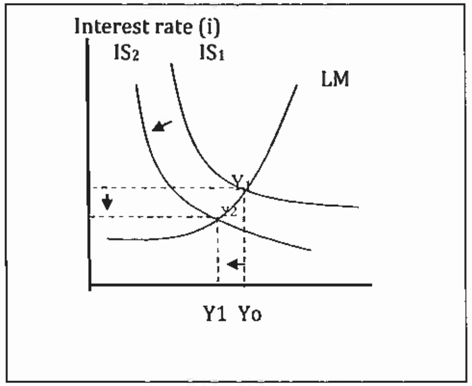
Section B: Choice questions

1. **In 2009 policy makers in SA used fiscal and monetary policies to deal with the impact of the great recession on the SA economy. Use the IS-LM model to explain (15):**

   a. **Impact of recession on SA economy**

   Despite the fact that the crisis took place in the financial sector, the result was a negative effect on the level of consumer and investor confidence. Both these factors are autonomous factors that affect the level of aggregate demand. The result is that this led to a decrease in aggregate demand and a leftward shift of the IS curve. The decrease in aggregate demand would lead to the following:

   Z↓→ Y↓; Y↓→ Md↓ ; Md↓ → i↓ . The decrease in interest rate will serve as a stimulus to investment spending and as a result the effect on Y is constrained.



   b. **How fiscal and monetary policies were used to deal with this impact**

   Monetary policy is the action taken by the monetary authorities of a country to influence the economy through specific money market actions. In this case expansionary monetary policy would be applicable. The central bank would increase the nominal money supply which would result in a rightward shift of the LM curve. The increase in money supply would have the following impact on the economy:

   M↑→ M/P↑→ i↓; i↓→ I↑→ Z↑→ Y↑; Y↑→ I↑; Y↑→ C↑

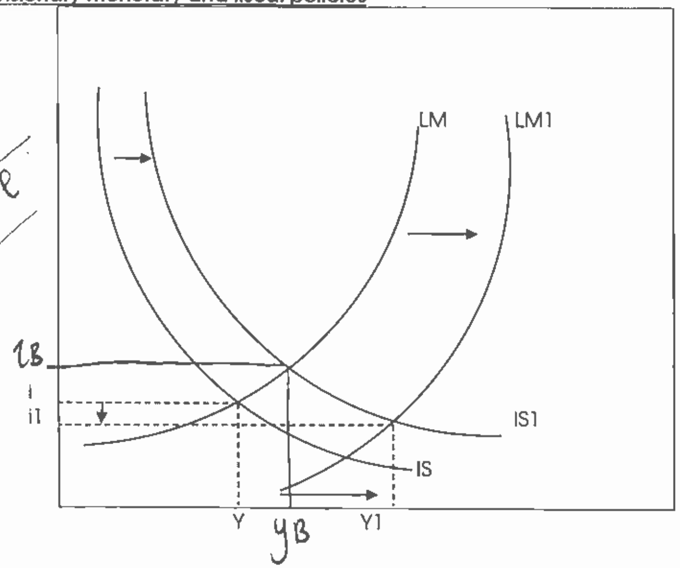
We also used expansionary fiscal policy where government spending was increased and taxes reduced

Expansionary monetary and fiscal policies

Keep it simple

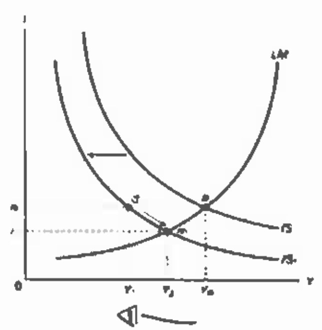
Contract fiscal

G↓ T↑



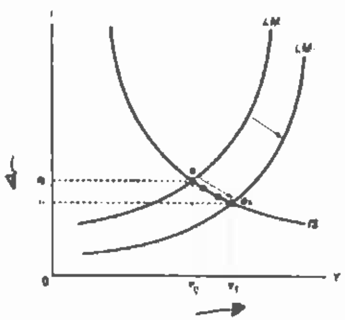
   c. **How countries can make use of fiscal and monetary policies to decrease the budget deficit and increase the level of output.**

Decrease in autonomous spending (contractionary fiscal policy)



Increase in money supply (expansionary monetary policy)

ms↑ i↓

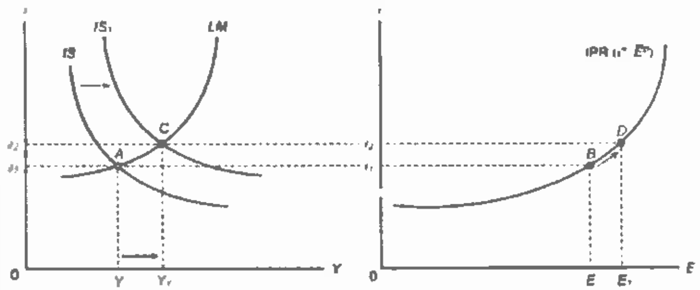


MS ↓ i↑

2. Use the IS-LM model for an open economy to explain the possible impact of a contractionary monetary policy and an expansionary fiscal policy on the (15):
   a. Level of output and income
   b. Interest rate
   c. Financial account of BoP
   d. Exchange rate
   e. Trade balance

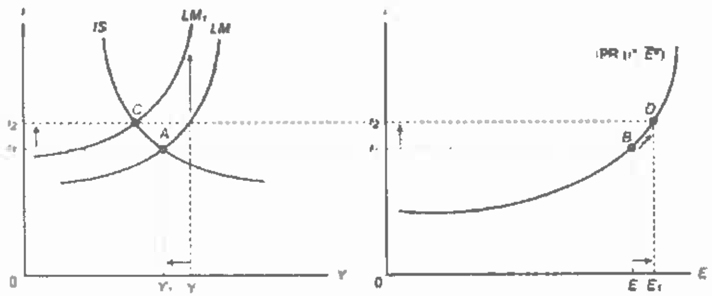
Expansionary Fiscal policy

G↑ ⇒ E↑ : appreciation



Contractionary monetary policy

M↓ ⇒ E↑ : appreciation



(11)

Variable/ Veranderlike	Impact of a contractionary monetary policy/ Impak van 'n beperkende monetêre beleid	Impact of an expansionary fiscal policy/ Impak van 'n ekspansionistiese fiskale beleid
Level of output and income/ Produksie- en inkomepeil	↓	↑
Interest rate/ Rentekoers	↑	↑ crowding out
Financial account of the balance of payments/ Finansiele rekening van die betalingsbalans	↑ inflow	↑ inflow
Exchange rate/ Wisselkoers	↑	↑
Trade balance/ Handelsbalans	↓ worsens	↓ worsens

3. **Use the AD-AS model to explain the short run to the medium and long run** impact of an expansionary fiscal policy **on the goods market, the financial market and labour market. (15)**

Short run: G ↑ Z↑ Y↑
Y↑ M^d↑ I↑
i↑ I↓
but Y↑ I↑ so ΔI is uncertain

Rightward shift of AD: a to b

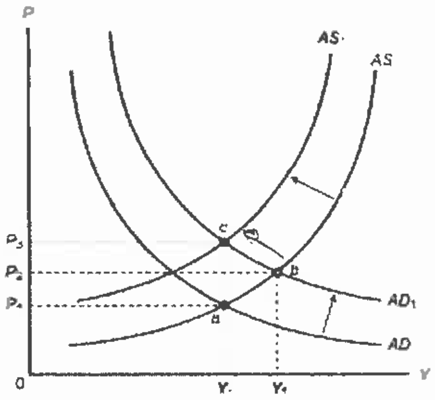
Labour market: Y↑ N↑ u↓ W↑ P↑ (employ) → medium Run

Upward movement along AS: b to c

Medium run: P↑ M/P↓ i↑ I↓ Z↓ Y↓

Leftward shift of AS

Impact of an expansionary fiscal policy



Section C: MCQ

1 Expenditure on gross domestic product

1 is the same as gross domestic expenditure
2 is the same as domestic demand for goods
3 includes spending on exports and exclude spending on imports
4 includes spending on imports and excludes spending on exports

Question 2 is based on the following information

Government spending = 120
Taxation = 90
Exports = 250
Imports = 300
Capital inflows = 70
Capital outflows = 30

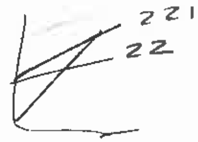
2 Which one of the following statements is correct?

1 The budget surplus is 30, the trade surplus is 50 and the balance on the financial account is - 40
2 The budget deficit is 30, the trade deficit is 50 and the balance on the financial account is 40
3 The budget deficit is 50, the trade deficit is 30 and the balance on the financial account is 40
4 The budget deficit is 40, the trade deficit is 50 and the balance on the financial account is 30
5 The budget deficit is 30, the trade deficit is 50 and the balance on the financial account is 30

3 Which of the following will increase the level of output and income in the goods market?

a An increase in taxation
b A decrease in the marginal propensity to save
c An increase in autonomous investment

1 a, b and c
2 Only a
3 Only b and c
4 Only c
5 Not a, b or c



4 In the goods market model an increase in expenditure implies an increase in output, income and employment. The implication of this is that an increase in expenditure can be used to achieve full employment. Which of the following are constraints to prevent an economy from reaching full employment through expenditure policies? gov

a Jobless growth
b Budget constraints on government spending
c A low propensity to import
d An increase in the inflation rate

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

Yi↑ ms↓

5 On the financial market the impact of an increase in the level of output and income and a decrease in the supply of money is that the interest rate

1. is unchanged
2. increases
3. decreases
4. is indeterminate

6 Which of the following can be regarded as endogenous variables in the IS-LM model?

a Nominal money supply
b Level of output and income
c Consumption spending
d Government spending

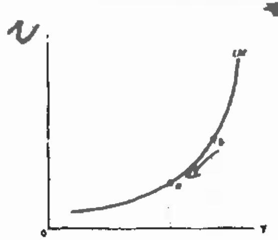
1. a, b, c and d
2. Only b and c
3. Only a, c and d
4. Only a and d
5. Not a, b, c or d

Contract G↓ T↑
Fisc

7. Which one of the following factors will cause a leftward shift of the IS curve?

1. An increase in investment spending due to a decrease in the interest rate
2. An increase in consumption spending due to an increase in the level of output and income
3. An increase in investment spending due to an increase in the level of output and income
4. A decrease in government spending
5. An increase in government spending

Question 8 is based on the following diagram of an LM curve



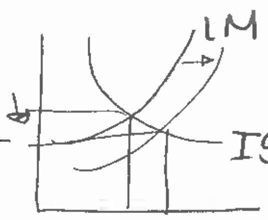
8 A downward movement from point b to point a implies that

1. government spending in the economy decreases causing the interest rate to decrease
2 a decrease in the level of output and income increases the money supply and the interest rate decreases
3 a decrease in the interest rate increases investment spending in the economy
4 a decrease in the level of output and income decreases the demand for money and the interest rate decreases.
5 the money supply in the economy decreases causing the level of output and income to decrease

I ↑ i ↓ Y ↑

9 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 increase
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 it is higher and in the case of monetary policy investment spending is lower

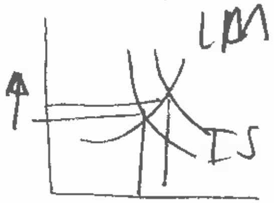


10 From the perspective of South Africa, a depreciation of the nominal exchange rate and an increase in the domestic price level relative to foreign price levels .

1 will definitely increase the real exchange rate
2 will definitely decrease the real exchange rate
3 is not necessarily sufficient to bring about a decrease in the real exchange rate
4 is not necessarily sufficient to bring about an increase in the real exchange rate

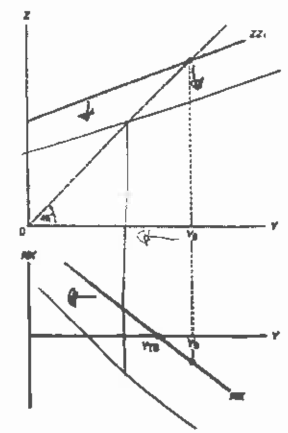
pg 103

$\varepsilon = \frac{\downarrow E P \uparrow}{P^*}$



I ↓ i ↑ Y ↑ I ↑

Question 11 is based on the following diagram



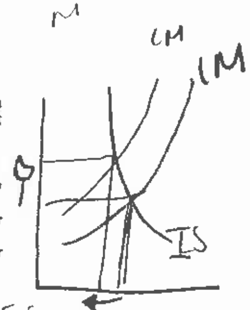
X ↓ Z ↓ Y ↓ IM ↓

11 What would happen to the level of output and the trade balance if exports decrease?

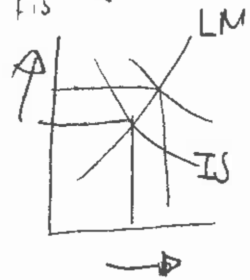
1 The level of output will decrease and the trade deficit will increase
2 The level of output will decrease and the trade surplus will decrease
3 The level of output will be unchanged and the trade deficit will increase
4 The level of output will increase and the trade deficit will increase
5 Both the level of output and trade balance will be unchanged

12 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

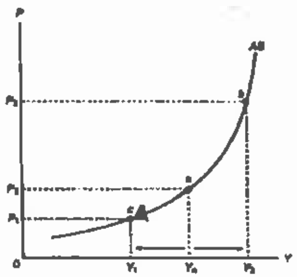
1 in both cases the exchange rate appreciates and the trade deficit decreases
2 in both cases the exchange rate appreciates while the trade deficit for fiscal policy increases and for monetary policy it decreases
3 for fiscal policy the exchange rate depreciate and the trade deficit increases while for monetary policy the exchange rate appreciate and the trade deficit decreases
4 for fiscal policy the exchange rate appreciate and the trade deficit decreases while for monetary policy the exchange rate depreciate and the trade deficit increases
5 in both cases the exchange rate appreciates and the trade deficit increases



F IS



Question 13 is based on the following AS curve



13 A movement from point a to point c indicates that the

a nominal wage is unchanged ×
b real wage decreases ×
c unemployment rate decreases. ✓ ✗

1 Only a
2 Only b
3 Only c
4 Only b and c
5 Not a, b or c

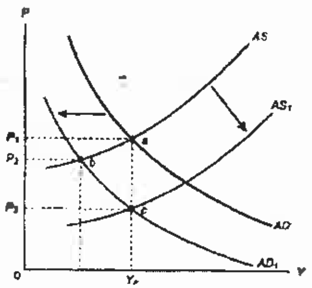
14 Comparing the medium to long run impact in an AS-AD model of an expansionary monetary policy with that of an expansionary fiscal policy on investment spending the results are

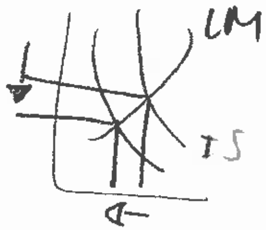
1 For fiscal policy investment spending is lower and for monetary policy investment spending is higher
2 In both cases investment spending is unchanged
3 In both cases investment spending is higher
4 In both cases investment spending it is lower
5 For fiscal policy investment spending is lower and for monetary policy investment spending is unchanged

Ms↑ i↓ I↑

F i↑ I↓
Y↑ I↑

Question 15 is based on the following diagram which represents the impact of a contractionary fiscal policy





15 Which one of the following statements is/are correct?

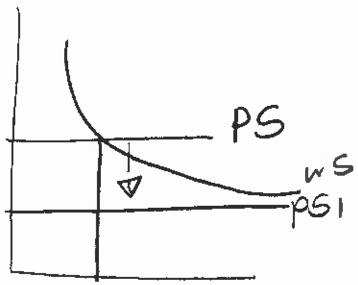
1. In the short run the increase in the interest rate in the financial market will lead to a decrease in investment in the goods market, a decrease in the demand for goods and a decrease in the level of output and income. This is represented by a shift from AD to AD_1
2 The movement along the AD curve from point b to point c is the result of the events in the labour market in the short run
3 In the medium run, the AS curve will shift from AS to AS_1 because of the following chain of events: $P^e\downarrow \rightarrow W\downarrow \rightarrow P\downarrow$
4 At point c the level of output is at the natural level of output and all the real values are equal to their original values

16 Which of the following statements are correct?

An increase in the price of oil (a supply shock) will . ↑ mu

a shift the PS curve upwards ×
b lead to a lower real wage ✓
c lead to higher natural rate of unemployment ✓
d shift the AS curve to the right ×
e lead to a lower natural level of output Y

1 a, b, c and e
2 b, c, d and e
3 a and d
4 b, d and e
5 b, c and e



Oct 2012 MCQ solutions

Q1 - 3	Q6 - 2	Q11 - 1
Q2 - 2	Q7 - 4	Q12 - 5
Q3 - 3	Q8 - 4	Q13 - 5
Q4 - 3	Q9 - 2	Q14 - 2
Q5 - 1	Q10 - 3	Q15 - 3
		Q16 - 5

Exam Solutions May 2011

Section A:

Question 1

Explain the difference between autonomous and induced consumption. (2)

(a) Autonomous consumption - consumption spending by households that is independent of income.✓
Induced consumption - consumption spending by households that is caused by or dependent upon income. There is a positive relationship between induced consumption and the level of income.

Question 2

Distinguish between a budget deficit and financial account deficit of the balance of payments. (3)

(a) Budget deficit: This refers to the difference between government spending (G) and government revenue, namely taxes (T). A deficit implies that G exceeds T.
A Financial account deficit refers to the balance on the financial account in the balance of payments. This means that financial outflows exceed financial inflows.

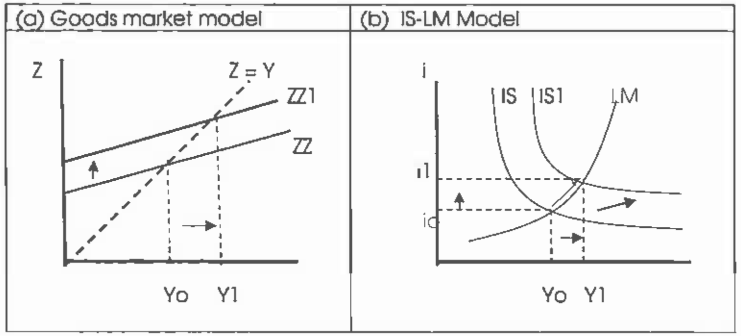
Question 3

Explain and illustrate using two digrams the impact of an expansionary fiscal policy in the:

(a) **Goods market**
Expansionary fiscal policy can take the form of an increase in government spending and/or a decrease in tax rate. Either way it will lead to an increase in aggregate demand. In the goods market model this will be indicated by an upward shift of the aggregate demand (ZZ) line and consequently an increase in the equilibrium level of income.

(b) **IS-LM**
In the IS-LM model the increase in aggregate demand caused by the expansionary fiscal policy is illustrated by a rightward shift of the IS curve.
The following occurs: $Z\uparrow \rightarrow Y\uparrow$. In the financial market this leads to $Y\uparrow \rightarrow Md\uparrow$ and therefore $i\uparrow$. This is illustrated by a movement along the LM curve.

(c) **Draw the two diagrams in the space provided and compare the results.**



(c) In both cases the level of output (Y) will increase. In the case of the goods market model I is autonomous so is not affected by the change in government spending or taxes. In the case of the IS-LM model, I is endogenous and is influenced by both the interest rate and the level of income. The increase in the interest rate will cause I to decrease while the increase in Y will lead to an increase in I. The end result is indeterminate.

Question 4

Read the following paragraph and answer the questions.

The international crisis of 2007 impacted negatively on consumer and investors' confidence

-contractionary

(a) Use the IS-LM model to show and explain the impact of the crisis on the level of output and income

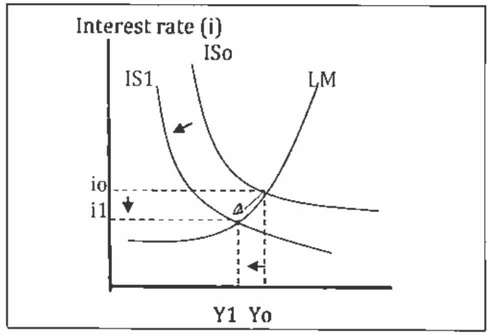
Despite the fact that the crisis took place in the financial sector, the result was a negative effect on the level of consumer and investor confidence. Both these factors are autonomous factors that affect the level of aggregate demand. The result is that this led to a decrease in aggregate demand and a leftward shift of the IS curve. The decrease in aggregate demand would lead to the following:

Z↓ Y↓

Y↓ Md↓

Md↓ i↓

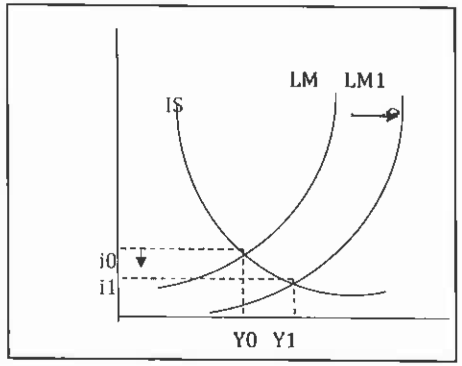
Z↓→ Y↓; Y↓→ Md↓ ; Md↓ → i↓ . The decrease in interest rate will serve as a stimulus to investment spending and as a result the effect on Y is constrained.



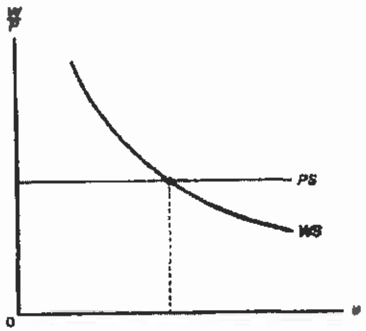
(b) In response to the worldwide economic crisis many countries used monetary policies in an attempt to soften the impact on the level of output and income. Use the IS-LM model to explain how monetary policy can be used to soften the impact of the crisis. (4)

Monetary policy is the action taken by the monetary authorities of a country to influence the economy through specific money market actions. In this case expansionary monetary policy would be applicable. The central bank would increase the nominal money supply which would result in a rightward shift of the LM curve. The increase in money supply would have the following impact on the economy:

M↑→ M/P↑→ i↓; i↓→ I↑→ Z↑→ Y↑; Y↑→ I↑; Y↑→ C↑



Question 5
Use the following diagram to explain what happens to the following variables if the unemployment rate decreases. (7)



Targeted real wages:
If the unemployment rate decreases then the bargaining power of workers increases. Workers then bargain for a higher nominal wage in order to try and increase their real wage (targeted real wage)

Nominal wage:
The nominal wage (W) increases because of the increase in bargaining power.

Implied real wage (feasible wage)
The implied real wage will remain the same. The increase in (W) will result in an increase in prices and the real wage (W/P) will stay the same. This is determined through the price setting function.

Section B: Choice questions

Question 1
(a) Use the goods market model to show and explain why the net effect of an equal increase in government spending and taxes will still have a stimulatory effect on the level of output and income. (8)

The initial effect of an increase in taxes is on the disposable income of households, while the change in government spending is directly on aggregate demand.

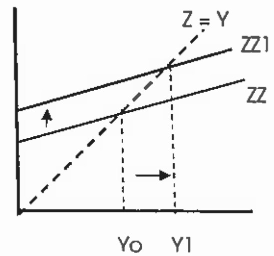
An increase in the level of taxation causes disposable income to decrease by an amount equal to the increase in taxes, however, the decrease in consumption spending is limited by the marginal propensity to consume effect (cT), that is, the decrease in consumption spending is less than 1.

The increase in government spending (G) increases aggregate demand and therefore leads to an increase in the level of output and income (Y). This increase in Y in turn leads to an increase in consumption spending by households and therefore a further increase in aggregate demand. This is the multiplier effect.

The end result is that the effect of an equal increase in G and T will still lead to an increase in Y.

Draw a graph showing Keynesian model; show upward shift of ZZ line and an increase in the equilibrium level of income.

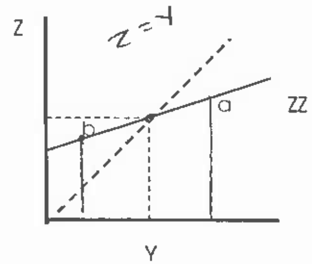
Goods market model



(b) List four constraints on using fiscal policy to increase the demand for goods in SA. (4)

- Structural unemployment requires a different remedy ✓
- Jobless growth (capital-intensive production) ✓
- Wage increases might lead to inflation ✓
- Budget deficit constraint as well as crowding out effect ✓
- Balance of payments might act as a constraint (with high import propensity) ✓

(c) Indicate clearly on the following diagram the excess supply and excess demand position. Give the chain of events in reaching equilibrium in the case of excess demand. (3)

Goods market model	SG pg 43
	✓ a - excess supply b - excess demand ✓

Chain of events. Z > Y: Y↑ C↑ Z↑

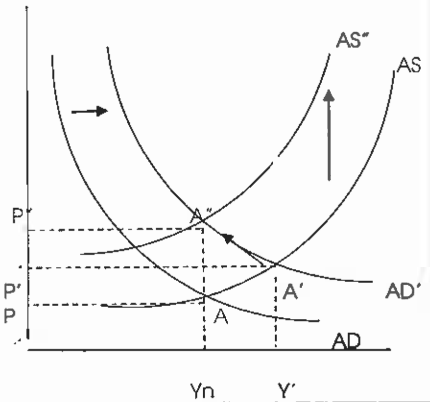
Question 2

(a) List the three properties of the AS curve. (3)

- AS has a positive slope
- The expected price level is the same along a given AS curve.
- The real wage is the same along any given AS curve

(c) Use the AS-AD model to illustrate and explain the impact of an expansionary monetary policy in the medium to long run. (12)

Refer to pages 171 to 175 for explanation and graph.

AD-AS Model - Monetary Expansion	Explanation
	M↑ ⇒ M/P↑ ⇒ i↓ i↓ ⇒ I↑ ⇒ Z↑ ⇒ Y↑ Y↑ ⇒ N↑ ⇒ u↓ ⇒ W↑ ⇒P↑ Pe↑ ⇒ W↑ ⇒ P↑ P↑ ⇒ M/P↓ ⇒ i↑ ⇒ I↓ ⇒ Z↓⇒Y↓

M

Question 3

(a) Using the following diagram, indicate what happens to the level of output and income and the trade balance if:

(i) **Exports increase**

Then Net exports (NX) will increase and the NX curve will shift to the right. In addition, the increase exports leads to an increase in aggregate demand (Z) and the ZZ line will shift upward. This leads to an increase in Y and an improvement in the trade balance.

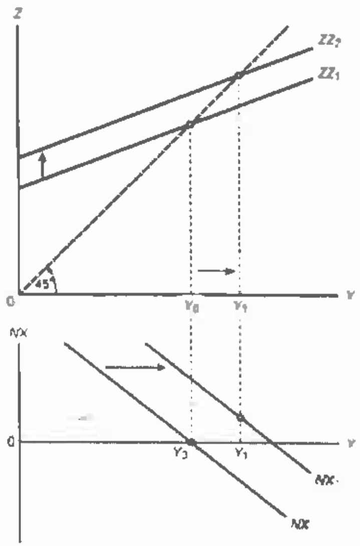
(ii) **Government spending increases**

If government spending increases the ZZ line will shift upwards (aggregate demand increases) and the equilibrium level of income increases. The increase in Y leads to an increase in imports (IM) and the trade balance will worsen (NX decreases).

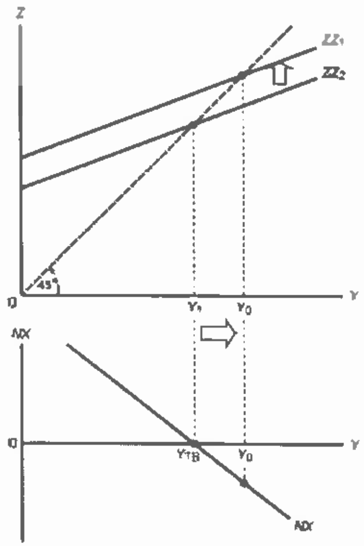
(iii) **Compare the above results regarding the level of output and trade balance**

In the case of (i) the level of output increases and the trade balance improves, while for (ii) the level of output also increases but the trade balance worsens.

Exports Increase



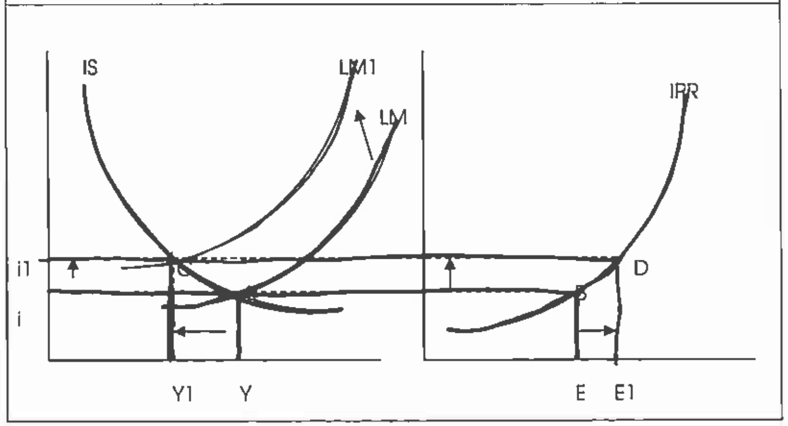
Government Spending increases



(b) **Draw a diagram of the IS-LM model for an open economy to indicate what will happen to the nominal exchange rate if a contractionary monetary policy is applied. Explain the impact on the trade balance. (7)**

Refer to page 136 and 137 (202: page 238/9) in the study guide.

IS-LM – Monetary Contraction



(c) **Use a chain of events to indicate the impact of a depreciation of the nominal exchange rate on the demand for goods and the level of output and income in the goods market for an open economy. (2)**

E ↓→ X↑→ NX↑ Also NX↑→ Z↑→ Y↑

E↓ X↑ NX↑

NX↑ Z↑ Y↑

SECTION C: MCQ May/June 2011

1. 1	6. 2	11. 2	16. 2
2. 5	7. 2	12. 2	17. 4
3. 2	8. 3	13. 4	18. 1
4. 1	9. 5	14. 4	19. 2
5. 3	10. 1	15. 3	20. 4