ECONOMICS 1B {ECS 1601}

INTERDEPENDENCE OF THE MAJOR SECTORS, MARKET AND FLOWS IN A MIXED ECONOMY

- Production is not pursued for its own benefit, the ultimate aim is to use or consume the products to satisfy human wants.
- Production creates income and this income is then spent to purchase products.
- This process contains 3 major elements are:
  - Production
  - Income
  - Spending.
- One problem is how the income is distributed among the various participants in the economy.
- The following are 4 economic participants:
  - Households/Consumption (C)
  - Government Expenditure (G)
  - Foreign sector (Exports & Imports) (F)
  - Businesses/Firms (B)
- Production, income and spending are all FLOWS.
- Stock variable – can only be measured at a particular point in time and has no time dimension (wealth, assets, liabilities, capital, population, and balance on savings account).
- Flow variable – can be measured over a period of time (income, profit, loss, investment).
- In mixed economy households, firms, government and foreign sector are all participants.
- Exchange is an important economic activity that links all the various sectors.

1. HOUSEHOLDS

- Households can be defined as all the people who live together and who make joint economic decisions.
- Can be an individual, whole family.
- These members are called consumers.
- Consumption – the act of using or consuming goods and services.
- Symbol C = total consumption or consumer.

In a market economy it is the households or consumers that largely determine what should be produced.
In a mixed economy most of the factors of production are owned by households.
Households sell their factors of production to firms that convert them into goods and services

2. BUSINESSES/FIRMS

- Firm can be defined as the unit that employs factors of production to produce goods and services that are sold in the goods market.
- Different types of firms are – individuals or sole proprietorship, cc, companies, partnerships.
- Profit = difference between revenue and cost.
- Investment or capital formation = the act of purchasing capital goods.
- Firms are responsible for spending on capital goods.

Goods market – in macroeconomics we treat the goods market as if there were only one market for all goods and services.

Factor market – Factors of production are purchased and sold in many markets called factor markets.

Circular flow of goods and services – the households offer factors of production for sale on the factor market where these factors are purchased by the firms.
  - The firms combine the factors of production and produce consumer goods and services.
  - These goods and services are offered for sale on the goods market where they are purchased by the households.
  - The circular flow of income and spending – flow of income and spending is usually a monetary flow.
  - Firms purchase the factors of production in the factor market.
  - This spending by firms represents the income of the households.
  - The households in turn spend their income by purchasing goods and services in the goods market.

3. Government

- Includes all aspects of local, regional, provincial and national government.
- Public sector – everything that is owned by the government.
- Government includes all politicians, civil servants, government agencies and other bodies belonging to or under the control of government.
- \( G \) = government expenditure
Government spending and Taxes

- T = taxes, transfer payments – transfer of income and expenditure from certain individuals and groups.
- Government spending is an injection to the circular flow.
- Taxes are a leakage to the circular flow.
- Exports are an injection (sell)
- Imports are a withdrawal (buy)

**Symbols**

- C – Consumer spending - injection
- I – Investment - injection
- G – Government spending - injection
- X – Exports - injection
- S – Savings - leakage
- T – Taxes - leakage
- Z – Imports - leakage

**Total expenditure = C + I + G + (X - Z)**
4. Foreign sector

- 4th major sector of the world.
- S.A economy is an open economy with strong links with the rest of the world.
- Balance of payments = various flows between S.A and rest of the world. Exports = \( X \), injection into economy, are goods produced within the country and sold outside the country. Imports = \( Z \), withdrawal from economy, produced outside and purchased locally.

**Financial institutions** in the circular flow of income and spending – surplus units = individuals are in a position to save because they spend less (savings is a withdrawal), deficit units = individuals that spend more than they earn (investment is a leakage).

**THE CIRCULAR FLOW OF INCOME**

- Goods and services flow clockwise
- Income and spending flow anti-clockwise
MULTIPLE CHOICE:

- The 3 major flows in the economy as a whole are total production, total income and total spending.
- 2 basic participants are households and firms
- Stock variable – eg balance in a savings account on a particular day
- Consumption is a flow variable
- Capital a stock variable
- Members of a household are called consumers
- Consumers are rational in other words they will always try to maximize their satisfaction given the means at their disposal
- Households responsible for the spending on consumer goods
- Capital goods are purchased by firms
- 2 sets of markets in the economy – goods markets (market for tomatoes) and factor markets (labour market)
- Firms purchase in the factor markets and sell in the goods market
- Households sell in the factor markets and purchase in the goods markets
- Major flows associated with the government are – government spending, taxes and transfer payments
- Taxes = leakage from circular flow of income and spending
- Government spending = injection into the circular flow of income
- The foreign sector is linked to the domestic flow of income and spending through imports and exports
- Savings, imports, taxes = withdrawal
- Investment, exports, government spending = injection
- C = spending by households on consumer goods and services
- I = spending by firms on capital goods
- G = spending by government on goods and services
- X = Spending by foreigners on SA goods and services - (minus) S.A imported goods and services (Z)
- TOTAL EXPENDITURE = C + I + G + X - Z

THE MONETARY SECTOR

- Money can be defined as anything that is generally accepted as payment of goods and services or that is accepted in settlement of debt. (Money is what money does).
- Barter economy is an economy that operates without money where goods are exchanges for other goods.

The functions of money:

1. **Medium of exchange** - Money serves as a lubricant or intermediary to smooth the process of exchange and to make it more efficient.
2. **Money as a unit of account** – is an agreed measure for stating the prices of goods and services.

3. **Money as a store of value** – most common for holding wealth is money. It’s convenient and can be used immediately in exchange for other assets. Most liquid form in which wealth can be kept

4. **Income** = reward earned in the production process, **wealth** = consists of assets that have accumulated over time.

**Legal tender** – means that old notes or coins cannot be refused if they are tendered as payment.

- M1 = the conventional measure – is defined solely on the basis of the function of money as a medium of exchange – includes coins, and notes as well as all demand deposits including cheque and transmission deposits
- M2 = M1 plus all other short term and medium term deposits of the domestic private sector with monetary institutions.
- M3 = M2 – plus all long term deposits of the domestic private sector with monetary institutions.

- Monetary authorities in S.A are – South African Reserve Bank
- Demand deposits – are deposits that can be withdrawn immediately by means of cheque.

\[ M = C + D \text{ – (QUANTITY OF MONEY = CASH + DEMAND DEPOSITS)} \]

**FINANCIAL INTERMEDIARIES**

- One main function is to act as an intermediary between the surplus units and deficit units in the monetary economy.

**South African Reserve Bank (SARB)**

- It is most important financial institution.
- Primary function is to protect the value of the currency in the interest of balanced and sustainable economic growth in the republic.
- Must also perform its function independently and without fear, favour or prejudice but there must be regular consultation between the bank and the cabinet member responsible for national financial matters.
4 Functions of SARB

1. formulation and implementation of monetary policy – repo rate tender system is the main instrument
2. Service to the government (banker and advisor, custodian of gold and foreign exchange reserves, administration of exchange control.
3. provision of economic and statistical services
4. maintaining financial stability – (bank supervision , the national payment system, banker to other banks, banknotes and coins)

The reserve asset position and the credit multiplier

- Each bank has to ensure that it always has sufficient cash reserves available to provide for cash withdrawals, must provide for the claims of other banks, which may exceed its own claims.
- Confidence of creditors must be maintained.
- To maintain confidence in the banking system, the monetary authorities lay down legal requirements stipulating the amount of cash reserves to be held against the total liabilities of a bank.
- Any increase in the banks demand deposits increases the amount that the banks have to hold in the form of cash reserves with the reserve bank.

R = cash reserves
D = demand deposits

Any increase in demand deposits will raise the required minimum cash reserves.

- Increase in cash reserve requirements = reduction in credit multiplier

- The present system of monetary control in SA seeks to control the amount of demand deposits by influencing the cost of additional cash reserves rather than by variations in the cash reserve ratio or by seeking to control the actual amount of the banks aggregate cash reserve holdings.

- Any increase in demand deposits as a result of an increase in the provision or use of overdraft facilities forces banks to acquire additional reserves which have to be borrowed from the SARB at the repo rate.
- The higher the repo rate the more expensive credit becomes and the smaller the demand for credit will be. As the credit falls so too will the size of M1.
Other factors that can influence the money supply:

- Transactions with foreign countries, government transactions, foreign trade, international capital movements. Payments for exports will have a negative impact on the quantity of money.

  - Foreign transactions – a country’s money supply generally increases when it’s gold and foreign exchange reserves increase and falls when gold and foreign exchange reserves decrease.

  - The demand for money – is the amount that the various participants in the economy plan to hold in the form of money balances. The opportunity cost of holding any money balance is the interest that could have been earned had the money been used to purchase bonds instead.

  - **2 basic components of the demand for money are** – (a) the transaction of demand for money which arises from the medium of exchange function, (b) demand for money as an asset which arises from the store of value function.

2 basic components of the demand for money:

(a) transaction demand – for money which arises from the medium of exchange function

(b) Demand for money as an asset – which arises from the store of value function.

Reasons for holding money are:

(a) Transaction motive – all participants in a money economy hold money as a medium of exchange. Transactions demand for money is therefore a function of national income.

(b) Precautionary motive (for unforeseen expenditure)

(c) Speculative motive - inverse relationship between the quantities of money demanded for speculation purposes and the level of the interest rate.

(d) Active balances = transactions & precautionary motives.

(e) Passive balance = speculative motive

Demand for money or liquidity preference - \( L = f (Y, i) \)

\( L \) – interest rate
\( L \) = quantity of money demanded
Y = national income

*Interest rate* – *generally described as the price of loanable funds.*

**Equilibrium in the money market:**

- Demand-determined money supply – money supply depends on the demand for money and the cost of credit (interest rate). Demand for money is a function of income and the rate of interest.

**Monetary policy** - can be defined as the measure taken by the monetary authorities to influence the quantity of money or rate of interest with a view to achieving stable prices, full employment and economic growth.

**Main features of SA monetary policy:**

(a) ultimate objective is balanced and sustainable economic growth
(b) intermediate objective is a pre-announced inflation target
(c) operational variable – is short term interest rates, which are governed by changes in the repo rate
(d) Monetary control system is a classical cash reserve system.

**The instruments of monetary policy:**

(a) Accommodation policy – banks obliged to hold 2.5% of their total liabilities to the public in the form of cash.
(b) Open-market policy - instrument of monetary policy consist of the sale or purchase of domestic financial assets. (mainly government bills and government bonds)
(c) Other instruments - public debt management, intervention in foreign markets.

**Bank supervisors** – banks must also adhere to various requirements in respect of capital and liquid asset holding over and above the cash reserve requirement of 2.5 percent above liabilities.

**Liquid assets requirements:**

A bank must hold at least 5% of the value of total liabilities.
(a) cash reserve deposits with SARB
(b) banknotes and coins
(c) gold coin and bullion
(d) short term treasury bills
(e) short term land bank bills
(f) securities of the reserve bank
(g) government bonds

**MULTIPLE CHOICE**

- Barter economy – is an economy that goods are exchanged for other goods
- The use of money eliminates the need for a double coincidence of wants associated with a barter economy
- The essential function of money is that it serves as a medium of exchange
- When inflation is experienced, money loses some of its usefulness as a store of value
- Money is a financial asset
- During inflation it is often more advantageous to keep certain assets than to keep only money
- Demand deposits can be withdrawn immediately by writing a cheque and therefore demand deposits form part of the quantity of money
- 3 measures of quantity of money are = M1, M2 & M3
- M1 = narrowest measure of money = coins notes and demand deposits
- Cash reserve of any S.A bank is held in a non-interest bearing account with SARB
- Money creation process is based on the ability of banks to lend part of the deposits they receive from customers
- Banks can create demand deposits by granting credit to their clients in the forms of overdraft facilities
- When a person deposits money into the bank there is no immediate change in the quantity of money
- Payment for imports have a negative impact on the quantity of money
- The opportunity cost of holding money is the interest that could have been earned by holding interest bearing assets instead
- The demand for money arises from the functions of money as a medium of exchange and as a store of value
- The quantity of money demanded for transaction purposes is related to the function of money as a medium of exchange
- The demand for money for speculative purposes arises from the function of money as a store of value
- Since money is the most liquid of assets the demand for it is also called liquidity preference
- The quantity of money demanded for transaction and precautionary purposes is also called demand for active balances and is related to the level of income in the economy
There is an inverse relationship between the interest rate and the quantity of money demanded for speculative purposes.

The total quantity of money demanded depends on the level of income and the interest rate.

An increase in income will result in an increase in the quantity of money demanded at each interest rate, which can be illustrated by a rightward shift of the money demanded curve.

Monetary policy can be defined as the measures taken by the monetary authorities to influence the quantity of money or the rate of interest with a view to achieving stable prices, full employment and economic growth. Policy is formulated and implemented by the SARB.

**THE PUBLIC SECTOR**

- Central government – concerned with national issues
- Regional government – concerned with regional issues
- Local government – local issues
- Public corporations – Eskom etc

**Market failure** – occurs when the market system is unable to achieve an efficient allocation of resources, best available outcome was not achieved.

5 **reasons for market failure:**

(a) Monopoly and imperfect competition – options are – do nothing, impose price controls, tax the full excess profits, and regulate monopoly through competition policy.

(b) Public goods – failure of the market to provide sufficient quantities of goods and services. A good is rivalrous in consumption if no two persons can consume the same unit of a good and is non-rivalrous in consumption if its consumption by one person does not reduce its consumption by others. A good is excludable if it is possible or not prohibitively costly and is non-excludable if once it has been produced there is no way of stopping anyone from consuming it. Normal goods or pure private goods (fruit, shirts, computers) = rivalrous and excludable. Common property resources (wildlife, marine resources) = rivalrous but non-excludable. mixed goods (museums, cinemas)= excludable & non-rivalrous , public goods (street lights , basic research)= non rivalrous and non-excludable.

(c) Externalities – external costs = negative externalities, external benefits = positive externalities.

(d) Asymmetric information – to make informed choices the households and firms must have all information. Principle – agent problem managers have more information of the business than its owners.
(e) Common property resources – belong to no one and no one can be excluded from using them, however one person’s use of them reduces the availability to other persons. Therefore common resources are overexploited even to the extent of destruction (tragedy of the common).

**FURTHER REASONS FOR GOVERNMENT INTERVENTION:**

(a) income distribution – free markets tend to generate unequal income distribution
(b) macroeconomic growth and stability – free markets tend to fall short of achieving rapid economic growth, full employment and price stability and therefore government intervention in needed
(c) merit goods – can be defined as goods that are regarded as so beneficial to society that everyone should be in a position irrespective of their income to receive or consume them
(d) allocative function – achieving more efficient allocation of resources
(e) stabilization function – measure taken by government to promote macroeconomic stability
(f) distributive function – steps taken by government to achieve a more equitable or socially acceptable distribution of income than that generated by market forces

**HOW DOES THE GOVERNMENT INTERVENE?**

(a) Public provision – of goods and services. This can be achieved by public ownership or by public financing
(b) Market participant – government employs the largest employees in the labour market and can therefore influence other employers through its wage policy and employment practices.
(c) Government spending – government makes transfer payments – this is payment for which it receives nothing.
(d) Taxation – primary purpose is to finance government spending.

**GOVERNMENT FAILURE:**

Governments also fail with their intervention.

- Nationalisation – means that the government takes over ownership or management of private enterprises
- Privatisation is the opposite of nationalization – it refers to the transfer of ownership of assets from the public sector to the private sector.
- Commercialization or corporatization – means the transformation of state owned enterprises into commercial entities, subject to commercial legal requirements and governance structures.
**Fiscal policy and budget:**

- Is a policy in respect of the level and composition of government spending, taxation and borrowing. Its main instrument is the budget and main policies are **government spending** and **taxation**.
- Monetary policy is controlled by the central bank.
- **Budget deficit** = difference between government spending and taxation.
- Budget is essentially a reflection of political decisions about how much to spend, what to spend it on and how to finance the spending.

**Government spending:**

Important components of total spending are:

(a) Changing consumer preferences:
(b) redistribution of income
(c) misconceptions and entitlement
(d) population growth and urbanization

**Financing of government spending:**

(a) income from property – interest, dividends, etc
(b) Taxes – compulsory payments to government (types of taxes – direct and indirect taxes, general and selective taxes, progressive, proportional and regressive taxes. The difference between government spending and current revenue is called the **budget deficit**. This deficit is financed by borrowing. **Inflationary financing** – borrowing from the central bank using its overdraft facility. Taxes are compulsory and are the largest source of government revenue.

**Criteria for good tax: Neutrality, equity, administrative simplicity.**

**Types of taxes**

- Direct and indirect taxes:
  - Direct tax – taxes on income and wealth and indirect tax is taxes on goods and services or taxes on production and products.

- General and selective taxes:
  - VAT – is a general tax levied on most goods and services?
  - Excise duties are selective taxes which are levied on specific goods only. (Tobacco and alcohol)

- Progressive and proportional and regressive taxes:
o Progressive – ratio of tax paid to taxable income increases as taxable income increases – higher bracket income earned higher percentage tax is paid

o Proportional – ratio tax paid to taxable income is the same at all levels of income. (Company tax)

o Regressive – ratio between tax paid and taxable income decreases as taxable income increases.

o Personal income tax – most important form of direct tax in S.A.
Marginal tax rate is the rate at which each additional rand of income is taxed. Average tax rate is the ratio between the amount of tax paid and taxable income. Average tax is also called the effective tax rate. Personal income tax is a progressive tax.

o CGT – gains resulting from the sale of assets such as shares and investments and immovable property.

o Company tax – STC – proportional tax – this tax is levied on all profits distributed to shareholders in the form of dividends.

o VAT – most important indirect tax in S.A. – regressive tax. 14% rate

Multiple choice

1. General government consists of central, provincial and local government.
2. The existence of externalities prevents the attainment of socially efficient allocation of resources in the economy.
3. Market systems tend to generate unequal distributions of personal income.
4. The allocation function of government refers to actions by government to promote an efficient allocation of resources in the economy.
5. Government failure arises when politicians, bureaucrats and other interest groups put their own interest before those of society at large.
6. Privatisation could improve efficiency but it could have an adverse impact on employment.
7. Changes in taxes and government expenditure represent fiscal policy decisions.
8. Government could use the budget to try to influence variables such as total production, income, employment and to redistribute income in the economy.
9. Changes in level and composition of government spending sometimes reflect changes in society priorities but could also be the result of the influence of powerful special interest groups.
10. Political shocks and other major disturbances could exert strong upward pressure on government spending.
11. Excessive or unrealistic expectations about what government can deliver could exert upward pressure on real government spending.
12. Both a rapidly growing population and a high rate of urbanization tend to exert upward pressure of government spending.
13. The budget deficit or surplus is the difference between government spending and current revenue—mainly taxes.
14. If government finances part of its spending by borrowing from the central bank this is called inflationary financing.
15. Taxes that distort relative prices inhibit the functioning of the market mechanism and are not neutral.
16. An admission fee at a public swimming pool is an example of user charging.
17. Tax evasion illegal.
18. A tax is progressive if lower income groups pay a smaller % of their taxable income in the form of tax than higher income groups.

FOREIGN SECTOR

- One of the basic reasons for international trade is the fact that factors of production (natural resources, labour, capital, and entrepreneurship) are not evenly distributed among the nations of the world.

- **Absolute advantage**—this is when a country requires fewer resources to produce a specific good, they therefore have the absolute advantage in that industry. This is however not a prerequisite for international trade.

**Comparative or relative advantage**—each country will tend to specialize in and export those goods for which it has a comparative advantage. International trade will only occur if comparative advantages exist that is if the opportunity costs differ between countries.

**Sources if comparative advantage:**

(a) Technology— if a country possess a production process that is technologically superior to processed used by other countries.

(b) Resource endowments— one of the most important explanations of each country’s comparative advantage lies in the fact that different countries are endowed with different quantities of scarce resources. **Heckscher-Ohlin theory**— each country will tend to export those goods that most intensively use the country’s relatively abundant resources.

**Trade policy:**

(a) Import tariffs— are duties or taxes imposed on products imported into a country. Used to protect domestic firms against competition from imports (protective tariffs) or to raise government revenue (revenue tariffs).

(b) Specific tariffs— is a fixed amount that is levied on each unit of the imported commodity.
(c) Ad valorem tariff – is a tariff that is levied as a percentage of the value of the imported commodity.
(d) Revenue tariffs – usually imposed on items that are not produced in the domestic economy.
(e) Protective tariffs – are imposed to protect local industry of sector of economy from foreign competition.

**Economic impact of an import tariff:**

- Quantitative restrictions – import quotas - aims at influencing the prices of imported goods and control the level of physical of imports.
- Subsidies
- Other non-tariff barriers
- Exchange control
- Exchange rate policy

**Arguments for the use if trade barriers:**

- Balance of payments –
- Dumping – occurs when a firms sells its product in a foreign market at a lower than in the domestic market or at a lower price than in other export markets.
- Export subsidies
- Infant industries
- Employment
- Government revenue
- National security

**Arguments against trade barriers:**

- Retaliation by trade partners
- Welfare cost to society
- Inefficiency

**Trade policy on S.A:**

**Balance of payments:**

- All transactions relating to the flow of goods, services and funds across national boundaries are recorded in the balance of payments of the countries concerned. It is a systematic statistical account of all the economic transactions between the residents of a country and the residents of other countries in a specific period.
It consists of 4 accounts:

(a) Current account – merchandise imports and exports, simply reflect the rand value of goods imported and exported and the net gold exports = trade balance. Net gold exports are reflected separately because gold is our most important export and plays a very significant role in the international monetary system. Service receipts and payments for services (includes transportation of goods, travel etc), income receipts (income earned by SA residents) and income payments (income earned by non residents in S.A). current transfer is the last item (includes social security contributions and benefits , taxes imposed by government , private transfer of income such as gifts , personal ,immigrant and other remittances.

(b) capital transfer account – relatively insignificant

(c) Financial account – records all international transactions in assets and liabilities. 3 main components – (i) **direct investment** (where the purpose of the investor is to gain control of or have a meaningful say in management of the enterprise in which the investment is made) – (ii) **portfolio investment** (purchases of assets such as shares or bonds where the investor is only interested in the expected financial return . (iii) **Other investment** – residual category all other financial transactions loans, currency, and deposits. Balance = add net direct investment + net portfolio investment + net other investment.

(d) Unrecorded transactions – all errors and omissions that occur in compiling the other individual components of the bop are recorded here. The double entry accounting system is used.

  o **gold and other foreign reserves** – most important total in the balance of payments because – they reflect the overall balance of payments position , since payments and receipts of foreign currency do not necessarily coincide(large difference from week to week) , foreign reserves are required to ensure a smooth flow of international trade and finance. Foreign reserves are required to prevent large fluctuations in exchange rates between the domestic currency and foreign currencies, foreign reserves are an indicator of the authority’s scope to stimulate the economy without running into payment difficulties. **Change in net gold and other foreign reserves = combined balance of balances(BOP).**

Exports can be promoted through:

- domestic costs of production in check so that gods can be supplied on international markets at competitive prices
- assist potential exporter to find international market and subsidies some of the costs (**export promotion**)
• allow or engineer a depreciation of the rand against other currencies thereby making exports more competitive (ceteris paribus)

**Exchange rate**: rate at which currencies are exchanged, rate of change represents a ratio; this is the price of one currency in terms of another.

**Appreciation** – increase in price of a currency in relation to another

**Depreciation** – decrease in the price of a currency in relation to another.

- **Foreign exchange market** – is the international market in which one currency can be exchanged for other currencies.
- **Equilibrium exchange rate** – is the rate at which the quantity of dollars demanded equal the quantity of dollars supplied.
  - **Managed floating** – because of the potential volatility of exchange rates of exchange rates and because the authorities often wish to use the exchange rate to pursue particular policy objectives, exchange rates are often managed or manipulated to some extent by central Banks.
  - A central bank can only intervene to stabilize a depreciating currency if it has sufficient foreign reserves to do so.
  - Exchange rate policy – does nothing, intervene in the foreign exchange market by buying or selling foreign exchange, use interest rates to influence exchange rates.
  - Terms of trade – ratio between export prices (expressed as an index) and import prices (also expressed as an index)

**MEASURING THE PERFORMANCE OF THE ECONOMY**

Macroeconomic objectives (5):

- Economic growth
- Full employment
- Price stability
- Balance of payments stability (or external stability)
- Equitable distribution of income

**GDP** – gross domestic product: is the total value of all final goods and services produced within the boundaries of a country in a particular period (usually one year).

3 **methods of calculating GDP:**

(a) production method (value added)
(b) expenditure method – (final good and services)
(c) income method – (incomes of the Factors of Production)
**Prices used to calculate GDP.**

- When GDP is measured the prices used for that specific period must be used. – Market prices, basic prices and factor cost or factor income.
  - GDP at market prices - taxes on products + subsidies on products = GDP at basic prices.
  - GDP at basic prices – other taxes on products + other subsidies on production = GDP at factor cost.
  - GDP at factor cost + other taxes on production – other subsidies on production = GDP at basic prices.
  - GDP at basic prices + taxes on production – subsidies on products = GDP at market prices.
- GNI – gross national income = subtract from GDP all profits, interest and other income earned by residents of other countries (eg, profit earned by foreign investors in South African companies & all wages and income of foreigner workers (eg, Lesotho or Mozambique workers in S.A gold mines) – **add** – all above of all South African investors in overseas companies and South African workers working abroad.
- GNI = GDP + PRIMARY INCOME RECEIPTS – PRIMARY INCOME PAYMENTS
- GNI = GDP – NET PRIMARY INCOME PAYMENTS TO THE REST OF THE WORLD

**Expenditure of GDP:**

**3 methods of calculating GDP:**

(a) Production method – measures value added by all participants of the economy
(b) Income method – measures income received by the different FOP
(c) Expenditure method – measures the spending on final goods and services by the different participants
  - GDP = C + I + G + X − Z (consumption expenditure by household + investment spending + government spending + expenditure on exports – expenditure on imports.
  - Capital formation – additions to the countries capital stock, purchase of capital goods. Gross capital formation = no provision has been made for the consumption of fixed capital.
  - GDE – gross domestic expenditure – indicates the total value of spending on goods and services produced in the country. GDE = C + I + G
  - CPI – consumer price index – is an index of the prices of a representative basket of consumer goods and services.
Measuring inequality of the distribution of income:

(a) Lorenz curve – simple graphic device which illustrates the degree of inequality in the distribution of income.
(b) Gini coefficient
(c) quantile ratio

INCOME DETERMINATION IN A SIMPLE KEYNESIAN MACROECONOMIC MODEL:

➢ Macroeconomics is aimed at explaining the functioning of the economy, predicting what might happen and analyzing economic policy.

➢ Equilibrium is a situation in which there is no tendency for change. Equilibrium occurs when none of the participants have any incentive to change their behaviour. Things will therefore remain the same (as long as the underlying forces do not change).

The aim of the Keynesian macroeconomic model is to explain how national income is determined.

<table>
<thead>
<tr>
<th>ASSUMPTION</th>
<th>IMPLICATION</th>
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</thead>
<tbody>
<tr>
<td>The economy consists of households and firms only.</td>
<td>Total spending consists of consumption spending and investment spending.</td>
</tr>
<tr>
<td>There is no government</td>
<td>The model cannot be used to analyse government spending or taxes.</td>
</tr>
<tr>
<td>There is no foreign sector</td>
<td>Cannot be used to analyse, imports, exports, exchange rate, trade policy &amp; exchange rate policy.</td>
</tr>
<tr>
<td>Prices are given</td>
<td>Cannot be used to study inflation</td>
</tr>
<tr>
<td>Wages are given</td>
<td>Cannot be used to study the workings of labour market.</td>
</tr>
<tr>
<td>The money supply and interest rates are given</td>
<td>Cannot be used to study the financial markets or monetary policy.</td>
</tr>
<tr>
<td>Spending(demand) is the driving force that determines the level of economic activity</td>
<td>Production (supply) adjusts passively to changes in spending (demand)</td>
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</table>

Consumption function – relationship between consumption expenditure by households and total income.

3 characteristics:

(a) consumption increases as income increases – positive relationship between consumption spending and income
(b) Consumption is positive even if income is zero
(c) When income increases, consumption increases but the increase in consumption is less than the increase in income.

Consumption = c, income = y
• Autonomous consumption = is that part of consumption that is independent of the level of income.
• Total consumption = autonomous consumption + induced consumption.

• Marginal propensity to consume (c) – the ratio change between the change in consumption and the change in income.
• Marginal propensity C = change in consumption C divided by change in income.

**Factors that affect consumption:**

(a) interest rate 
(b) expectations 
(c) wealth 
(d) income distribution 
(e) Other factor – non income factors – level of taxation.

\[ S = Y - C \]
\[ = Y - (C + Cy) \]

**Investment spending:**

- Investment spending called capital formation in the national accounts. Main cause of fluctuations in economic activity. Refers to the production and purchase of capital goods that is man made means of production – buildings, plant, machinery and equipment. Investment thus relates to capital as a Factors Of Production.

**Investment decision**

- **Involves 3 important variables**
  
  (a) Cost of the capital goods 
  (b) Interest rate and 
  (c) The expected revenue to be earned from the capital gods.

- The higher the interest rate the lower the expected return – ceteris paribus. There is an inverse relationship between interest rate and the expected return on investment spending, ceteris paribus.

**The multiplier**

- The ratio between the eventual change in income and initial investment is called the multiplier. The size of the multiplier depends on the fraction of the additional income generated in each round that is spent in the next round that is on the marginal propensity to consume (c).
• The ratio between the change in income and the change in autonomous spending is called the multiplier.

• The equilibrium level of income can always be obtained by multiplying the total of all autonomous components of aggregate spending by the multiplier.

**Paradox of thrift**

• Refers to the fact that while an individual or single household can increase its income by saving more, the same result does not hold for society as a whole.

**KEYNESIAN MODELS INCLUDING THE GOVERNMENT AND THE FOREIGN SECTOR.**

**Government spending: G**

- There is no systematic relationship between government spending and income – G & Y
- Government spending increases the level of aggregate spending – G
- Leaves the multiplier unchanged
- Raises the equilibrium level of income ceteris paribus
- It follows that increases in government spending can be used to raise the level of production and income.

**Taxes:**

Government spending is an injection into the circular flow of income and spending in the economy. Taxes constitute a withdrawal or leakage.

**MACROECONOMIC THEORY AND POLICY**

- An expansionary fiscal policy will increase aggregate demand in the economy at each price level and this can be illustrated by rightward shift of the AD curve.
- Contractionary fiscal policy – increase in the repo rate.
- **Monetary transmission mechanism** – the way in which changes in the monetary sector are transmitted to the rest of the economy.
- Exogenous – under the control of the monetary authorities
- Endogenous – in the sense being determined by the interaction between the interest rate and the demand for money.
SARB changes the repo rate – number of variables is affected:

- domestic market interest rates
- the amount of money and bank credit
- expectations
- asset prices
- exchange rates

Monetary and fiscal policy lags:

1. Recognition lag – lag between changes in economic activity and recognition or realization that the changes have occurred.
2. the decision lag – ministers and officials from different departments have to meet to discuss matters and this takes time
3. implementation lag – once decisions have been made it takes time to implement these decisions
4. Impact lag – a further period lapses before they actually affect economic behaviour.

A balanced budget refers to a situation in which all government spending is financed by taxes that is where the budget deficit is zero.

Fiscal policy has generally been more successful in stimulating a depressed economy, while monetary policy can be employed with greater assurance to dampen an overheated economy in which inflationary pressures are severe.

INFLATION

Inflation is defined as a continuous and considerable rise in prices in general.

Measurement of inflation:

- CPI – most common used indicator of general price levels. CPI is estimated and published monthly. For any particular year there are therefore 12 figures. Calculation is as follows = index for a particular month for one year is compared to the same month of a previous year divided by the previous year figure x 100

Effects of inflation:

(a) distribution effects – inflation benefits debtors (borrowers) at the expense of creditors (lenders)
(b) Economic effects – has various economic effects that may result in lower economic growth and higher unemployment.
(c) Social and political effects – price increases makes people unhappy and they then start blaming each group.
Approaches to combat inflation

- Monetarist approach – the quantity theory of money – sustained high rates of monetary growth causes high inflation, while low rate of money growth will eventually produce low inflation.  
  \[ MV = PY \]

- \( M \) = the quantity of money
- \( V \) = the velocity of circulation of money
- \( P \) = the average price level
- \( Y \) = the real value of goods and services produced.

Demand-pull and cost –push inflation
Demand pull inflation occurs when the aggregate demand for goods and services increases while aggregate supply remains unchanged. Cost push inflation is triggered by increases in the cost if production. Increases in production costs push up the price level.

MULTIPLE Q & A FROM PAST ASSIGNMENTS AND EXAM PAPERS:

- Most basic function of money is that it functions as a medium of exchange
- When inflation is experienced, money loses some of its usefulness as a store of value
- The repo rate is the interest at which the reserve bank lends to commercial banks.
- the SARB is responsible for formulating monetary and fiscal policy
- In terms of the money demand, the interest rate represents the opportunity cost of holding money.
- Government transaction can exert an influence on the money supply.
- \( m1 = \) notes and coins + demand deposits
- \( M3 \) is the most important comprehensive definition of money.
- if government finances part of its spending from borrowing from the central bank, it is called inflationary financing
- tax evasion is illegal
- personal income tax is S.A is a direct, progressive tax
- A tax is regressive if the marginal tax rate decreases as income increases.
- criteria for good tax are neutrality, equity, compliance costs
- excise taxes are levied on selected products produced locally
- a specific tariff imposed on the imports of motor vehicles will increase the level of domestic production of motor vehicles
- The law of relative advantage states that 2 countries will benefit from trade if the opportunity costs of production differ between the 2 countries.
- One of the reasons for international trade is that all countries do not possess the same factors of production.
- The trade balance is the difference in the value of S.A merchandise exports plus net gold exports and merchandise imports.
• a farmer in free state buys a tractor from his neighbor – transaction not recorded in BOP
• In the simple Keynesian model equilibrium is attained where aggregate demand is equal to aggregate supply.
• consumption spending consists of autonomous spending and induced spending
• if the marginal propensity to save is 1/3 ,the marginal propensity to consume is 2/3
• in the simple Keynesian model if aggregate demand exceeds aggregate supply production must increase to reach equilibrium
• Along the 45 degree line aggregate demand is equal to aggregate supply.
• according to say’s law supply will create its own demand , at equilibrium there is full employment
• according to the Keynesian model equilibrium does not necessarily imply full employment
• if c = 2/3 then the multiplier is = 3
• taxes decrease the size of the multiplier
• if aggregate spending is 1200 and aggregate production is 1300 there is unplanned increase in inventories
• negative net exports will shift the aggregate demand curve downwards
• if the equilibrium level of income is below the full employment level , full employment can be reached by increasing autonomous consumption
• a change in marginal propensity to consume will change the size of the multiplier
• a decrease in the tax rate will increase induced consumption
• Investment is negatively related to the interest rate.
• government spending is independent of the level of income
• an increase in income will increase induced consumption
• imports are independent of the level of income
• The equilibrium level of income is determined by multiplying the multiplier by autonomous aggregate demand.
• Negative net exports will shift the aggregate demand curve downwards.
• autonomous aggregate demand – A = C + I + G + ( X – Z)
• AD – AS model – the general price level and total production of goods and services
• the AD curve indicates the level of total expenditure at various price levels in the economy
• in the AD – AS curve model prices are assumed to vary
• a decrease in the price of imported crude oil will reduce the costs of production and the AS curve will shift to the right
• the monetary transmission mechanism starts with a change in the interest rate
• government spending and taxes are 2 basic instruments of fiscal policy
• recognition , decision , implementation and impact lags are four types of policy lags
- A reduction in government spending is an example of contractionary fiscal policy.
- A decrease in the repo rate by the SARB is an example of expansionary monetary policy.
- A simultaneous increase in the price level and the level of production could be the result of an increase in investment spending.
- Inflation is the continuous and considerable increase in prices in general.
- Demand-pull inflation can be caused by expansionary monetary and fiscal policy measures.
- A depreciation of SA rand will increase the price of imported goods.
- Cost-push inflation is triggered by increases in the cost of production.
- High inflation in SA can damage the countries international competitiveness.
- Cost-push inflation leads to higher prices, decreased production and higher unemployment.
- An increase in the aggregate demand for goods and services can reduce cyclical unemployment.
- The costs of unemployment can be reduced through the availability of unemployment benefits and other social welfare programmes.
- An increase in aggregate demand for goods and services can reduce cyclical unemployment.
- An unemployment steam locomotive driver is a victim of structural unemployment.
- Seasonally unemployed – only employed during a specific season (life guard that works during summer).
- Frictionally unemployed – one quits a job in one place to find another job in a different place.
- Voluntarily unemployed – not bothered to find a job.
- Demand factors is one of the major sources if economic growth.
- When measuring economic growth changes in prices and population should be taken into account.
- Economic development and economic growth are both particularly important issues in SA.
- Real GDP is obtained by adjusting nominal GDP for inflation.
- GDP per capita is calculated by multiplying GDP by the number of people in the population.
- If real GDP increased by 5% from one year to the next, SA undoubtedly experienced economic growth during this period.
- A flow variable is measured over specific period.
- Stocks can change as a result of flows.
- In the circular flow of income and spending savings result in a decrease in the volume of the income flow.
- Financial institution acts as intermediary between those who save and those who wish to invest.
- Provincial government = government.
• macroeconomic objectives = external stability, full employment, economic growth, equitable distribution of income and price stability
• GDP defined as the value of all final goods and services produced in the domestic economy during a specific period
• 3 ways of calculating GDP = income, expenditure and production methods
• only transactions that represent production of new goods and services are included in the GDP
• When prices increase nominal GDP increases even if the production of new goods and services does not increase.
• if nominal GDP increases by 5% GDP at current prices will also increase by 5%
• BOP = all transactions with the rest of the world are recorded here.
• The balance of payments is an important indicator of the state of an economy.
• when constructing the Lorenz curve the cumulative percentage if the population is plotted against the cumulative percentage of income
• the higher the Gini coefficient the higher the income inequality
• money serves as a medium of exchange, unit of account and store of value
• modern bank notes value of exchange is based on confidence
• banks can create demand deposits by granting credit to their clients in the form of overdraft facilities
• When person deposits cash in a cheque account there is no immediate change in the quantity of money.
• The demand for money for speculation purposes is determined by the interest rate.
• the demand for money is a function of income and the interest rate in general terms the liquidity preference may be expressed as \( L = f(Y,I) \)
• the supply of money is determined by demand for money and the interest rate
• open market policy – the purchase and sale of financial assets to and from the banks by the SARB
• the difference between government spending and borrowing is called the budget deficit
• taxes which distort relative prices are not neutral
• tax is regressive when everyone pays the same amount of tax
• the degree to which the burden of a tax can be shifted depends on the price elasticities of demand and supply of the good or services in question
• the government prefers levying excise taxes on the consumption of goods with a high elasticity of demand
• the purpose for the introduction of an import tariff is to serve as a source of income to the government
• a country balance of payments can afford a deficit on the current account if there is a positive balance on the financial account
• an increase in the supply of dollars in the South African foreign exchange market can be caused by an increase in the gold prices
• 4 components of aggregate demand is investment, government expenditure, consumption spending and net exports
• the AD curve indicates the level of total expenditure at various price levels in the economy
• if real GDP increases and price level remains stable, it is likely that both aggregate demand and aggregate supply have increased
• the monetary transmission mechanism explains how changes in the monetary sectors is transmitted to the financial sector
• recognition lag is the same for fiscal and monetary policy
• inflation means buying less with your money now than before prices increased
• purchasing power of a consumer's income is inversely related with inflation
• if the inflation rate is lower than the nominal interest rate, it is likely that wealth will be redistributed from the borrower to the lender
• fiscal dividend – during inflation government realizes increased revenue from taxation
• stagflation refers to an increase in the general price level and a decrease in the level of output
• unemployment includes everybody who are willing and able to work but do not have a job
• improvements in quality of labour can reduce structural unemployment in S.A
• to combat unemployment steps must be taken to stimulate the demand for labour
• stricter immigration control could help to combat the unemployment problem in S.A
• imports and savings represent a withdrawal from the circular flow of income and spending
• GDP – the total value of all final goods and services produced in a country during a particular period
• example of GDP – the wages of a foreigner working at a S.A platinum mine
• gdp can be estimated by calculating the total of all factor incomes
• an inflation rate is calculated as the percentage change in a price index from one period to another
• the weights used in the calculation of the consumer price index take account of the relative importance of different goods in the pattern of consumer expenditure
• the real value of money is measured in terms of what it can purchase
• a R650 price tag on a pair of shoes is an example of money functioning as a unit of account
the repo rate is interest rate at which the reserve bank lends to commercial banks

VAT systems important purpose is raising government revenue

personal income tax in S.A is a direct, progressive tax

the burden of an indirect tax on a good will fall more heavily on the producer when demand for the good is price elastic

in order for a nation to gain from trade it must have a relative advantage in the production of a particular product

an expected decline of the value of the rand relative to the dollar is likely to increase the demand for US dollar

if the rand depreciates against the dollar the balance on the current account of S.A balance of payments will improve

autonomous investment means that investment is independent of the level of income

if aggregate spending exceeds aggregate production in the simple Keynesian model unplanned decrease in inventories will occur

a decrease in the budget surplus will lead to an increase in the level of economic activity

in the simple Keynesian model induced consumption is a function of the income level

in the simple Keynesian model with a government and foreign sector government spending is autonomous because it is essentially a political issue

the assumptions of the AD-As model imply that the model can be used to study monetary policy

in the AD-AS model a decrease in investment will result in a decrease in the price level

cost push inflation can be reduced by increasing productivity

stagflation refers to an increase in the price level accompanied by decreases in real output and employment

the government can worsen inflationary situation if it borrows more from the reserve bank to finance its expenditure

debtors tend to benefit during an inflationary period since the real value of their debt tends to fall

cyclical employment refers to employment which occurs during recessions

the opportunity cost involved when a country takes fiscal policy measures to stimulate economic growth is an increase in the inflation rate

an expansionary fiscal policy would be most likely to reduce unemployment of the marginal propensity to save is low

a business cycle refers to a recurring sequence of changes in business activity
Questions from past exam papers:

1. Name the 3 major flows in the economy - total production, total income and total spending.
2. List 3 basic functions of money - Medium of exchange - Money serves as a lubricant or intermediary to smooth the process of exchange and to make it more efficient. Money as a unit of account – is an agreed measure for stating the prices of goods and services. Money as a store of value – most common for holding wealth is money. It’s convenient and can be used immediately in exchange for other assets. Most liquid form in which wealth can be kept.
3. Mention the three broad ways in which government spending can be financed.
4. Is GDP a stock or flow – explain - flow variable as it is measured over a period of time generally a year.
5. Distinguish between real and financial transactions.
6. Define the repo rate and explain how it can be used as an instrument of contractionary monetary policy formation.
7. Explain the difference between direct taxes and indirect taxes – direct taxes – also called taxes on income and wealth, are levied on persons and organizations such as companies. They include personal income tax, company tax and estate duty. Indirect taxes – also called taxes on goods and services or taxes on products and production are levied on transactions, eg purchase of goods and services and are usually paid by those who consume the goods and services (VAT).
8. The simple Keynesian model assumes amongst other things that prices and wages are given. What are the implications of these 2 assumptions?
9. Explain the difference between the statutory (or legal) incidence of tax and the effective incidence.
10. Explain why policy makers cannot solve the stagflation dilemma using only demand management policies.
11. Explain why it is important to use real GDP or GNI per capita when measuring economic growth.
12. Explain the difference between a stock variable and a flow variable - Stock variable – can only be measured at a particular point in time and has no time dimension (wealth, assets, liabilities, capital, population, and balance on savings account). FLOW VARIABLE – can be measured over a period of time (income, profit, loss, investment).
13. Distinguish between nominal GDP and real GDP.
14. Distinguish between active balances and passive balances and mention the main determinant of the quantity demanded.
15. Describe the cost of unemployment to the society at large – unlike other factors of production, labour cannot be saved and used later. If labour is not used when it is available it is lost forever. Unemployment is also damaging to the social and political structure.
It tends to give rise to crime as well as to demonstrations, riots and other violent forms of unrest. In S.A there appears to be a definite correlation between criminal, social and violence and the level of unemployment. Unemployment can also lead to an overthrow of democratic institutions and processes.

16. List 3 problems associated with GDP as a measure of total production in the economy

17. List 4 main functions of the SARB - formulation and implementation of monetary policy – repo rate tender system main instrument. Service to the government (banker and advisor, custodian of gold and foreign exchange reserves, administration of exchange control. provision of economic and statistical services. maintaining financial stability – (bank supervision , the national payment system , banker to other banks , banknotes and coins.

18. Define monetary policy - Monetary policy can be defined as the measures taken by the monetary authorities to influence the quantity of money or the rate of interest with a view to achieving stable prices, full employment and economic growth.

19. Name 3 important withdrawals from the circular flow of income and spending

20. Name the four macroeconomic objectives - external stability , full employment , economic growth , equitable distribution of income and price stability

21. Mention 3 methods which are used to estimate GDP - production method (value added), expenditure method – (final good and services), income method – (incomes of the FOP)

22. Explain why taxes should be as neutral as possible

23. Explain why government spending is classified as autonomous spending in the Keynesian model

24. How does government spending affect the multiplier in the Keynesian model

25. What are the determinants of induced consumption in the Keynesian model of a closed economy with a government sector

26. Explain the basic function of a financial intermediary - financial institution acts as intermediary between those who save and those who wish to invest

27. Explain what measures can be taken to get rid of cost-push inflation

28. Discuss the effect of an increase in SA imports from the USA on the value of the rand on the S.A foreign exchange market – if the demand for dollars increase because of an increase will cause a change in the exchange rate, ceteris paribus. A change in the demand of dollars will be reflected by a shift of the demand curve to the right and the rand will depreciate against the dollar and therefore the dollar will appreciate against the rand – ceteris paribus

29. Name 3 measure used to measure inequality of distribution of income - Lorenz curve , Gini coefficient , quantile ratio
30. **Define GDP** - GDP is the total value of all final goods and services produced with boundaries of the country in a specific period. Gdp is one of the most important barometers of the performance of the economy.

31. **Explain why credit cards are not considered as money** – credit cards are not a medium of exchange. The card is simply a convenient means of making purchases (by obtaining short term loan from the bank or other financial institute which has issued the card).

32. **Name four lags associated with the implementation of fiscal and monetary policy** - Recognition lag – lag between changes in economic activity and recognition or realization that the changes have occurred. the decision lag – ministers and officials from different departments have to meet to discuss matters and this takes time. implementation lag – once decisions have been made it takes

33. **Time to implement these decisions. Impact lag** – a further period lapses before they actually affect economic behaviour.

34. **What are the main sources of economic growth viewed from the demand side** - there has to be an adequate and growing demand for goods and services produced in a country. Main sources are domestic demand (it is always possible to increase domestic demand by increasing government spending), exports (international trade is an important factor in economic growth. An increase in exports raises the growth rate and also relieves the balance of payments constraint), import substitution (another growth strategy linked to BOP is to reduce imports by manufacturing previously imported goods domestically)