



# Fundamentals of Economics

01 June 2016

## Marking Scheme

This marking scheme has been prepared as a **guide only** to markers. This is not a set of model answers, or the exclusive answers to the questions, and there will frequently be alternative responses which will provide a valid answer. Markers are advised that, unless a question specifies that an answer be provided in a particular form, then an answer that is correct (factually or in practical terms) **must** be given the available marks.

If there is doubt as to the correctness of an answer, the relevant NCC Education materials should be the first authority.

**Throughout the marking, please credit any valid alternative point.**

**Where markers award half marks in any part of a question, they should ensure that the total mark recorded for the question is rounded up to a whole mark.**

<b>Section A</b>
<b>Answer ALL questions from this section</b>

**Marks**

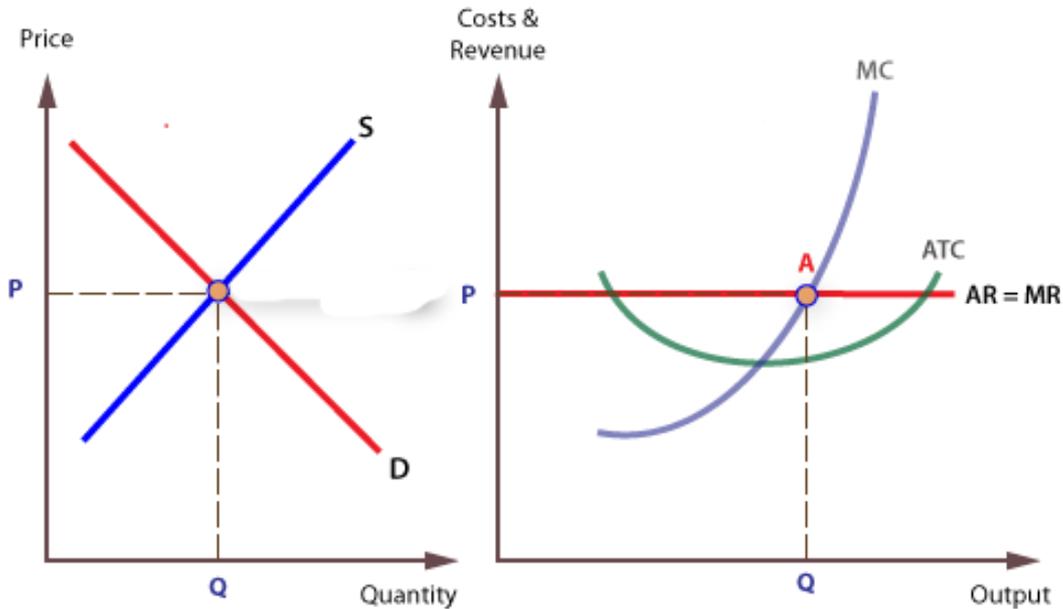
**Question 1**

- a) Explain what is meant by the real money supply. **2**  
***The real money supply is defined as the nominal money supply (M) divided by the price level (P).***
- b) i) If nominal wages and prices only adjust slowly what will happen if there is a one off increase in nominal money supply in the short term? **3**  
***There will be an increase in real money (1 mark) as prices have not yet adjusted (1 mark), given the M/P relationship. (1 mark).***
- ii) Explain what will consequently happen in the longer term. **5**  
***Excess supply of real money bids down interest rates (1 mark). In turn this increases demand for goods (1 mark). Over time this bids up goods prices (1 mark). After a period of time nominal wages in the labour market rise to keep pace with the rise in prices (1 mark). After a complete adjustment the one-off increase in real money supply will have led to an equivalent increase in prices and nominal wages and all real variables such as employment, output, interest rates and real money revert to their original levels (1 mark).***

**Total 10 Marks**

Question 2

- a) Draw the equilibrium position of a *perfectly competitive industry* and *the firm* in the short run. 6  
**The industry is shown in the left diagram, the firm is shown on the right diagram.**



**Per diagram:**

**Award 1 mark for correctly labelled axis, 1 mark for correctly drawing the curves and 1 mark for the correct labelling of the curves.**

- b) Identify the price maker and price taker in this situation. 2  
**The industry is the price maker and the firm is the price taker (1 mark for each).**
- c) Explain what types of profit are available in the short run and long run in this perfectly competitive industry. 2  
**Abnormal profits in the short run (1mark), normal profits in the long run due to the entry of new firms into the industry (1 mark).**

**Total 10 Marks**

## Question 3

- a) Explain what index numbers represent. Use an example to illustrate your point. 2  
***Index numbers express data relative to a given base value. (1 mark)***  
***If 2001 is chosen as a base year and values of 100 assigned to variables in that year. Values in all other years are expressed as proportions of that base value. (1 mark)]***
- b) Explain what is meant by the retail price index and state what it can measure. 3
- ***The retail price index (RPI) is an example of a composite index number (1 mark)***
  - ***A weighted average of index numbers of prices of product categories bought by households is produced. (1 mark)***
  - ***Changes in the RPI over time can measure inflation i.e. the rate at which average prices facing consumers rise. (1 mark)***
- c) Compare and contrast nominal and real values. 4
- ***Nominal values are measured in prices holding at the time of measurement (1 mark)***
  - ***Real values adjust nominal values for changes in the price level (1 mark)***
  - ***and express values in terms of prices which held at a single point of time (1 mark)***
  - ***this is done by multiplying a nominal value by a price index such as the RPI (1 mark).***
- d) Describe how composite index numbers are produced. 1  
***By developing weighted averages of individual index numbers.***

Total 10 Marks

## Question 4

- a) In an open economy with international trade and government intervention, identify the different components of aggregate demand in that economy. 5  
***Consumption, investment, government spending, exports and imports (1 mark for each)***
- b) Explain what is meant by Gross National Product (GNP). 2  
***GNP is total income earned by domestic citizens regardless of in which country their factor services were employed. (2 marks)***
- c) Identify three ways in which national income accounting might not generate an accurate estimate of national income. 3
- ***No inclusion of 'bads' e.g. activities leading to pollution (1 mark)***
  - ***Exclusion of some 'goods' e.g. unpaid work (1 mark)***
  - ***No valuation for leisure (1 mark)***

Total 10 Marks

## Question 5

- a) Explain where macroeconomic equilibrium output occurs. 2  
***It occurs when desired spending equals output.***
- i) Explain the consequence if desired spending exceeds output. 2  
***Firms have an incentive to increase output to meet the extra demand.***
- ii) Explain what is likely to occur if desired spending is less than output. 2  
***If desired spending is less than output then firms have an incentive to reduce output to avoid over-producing.***
- b) Outline what is meant by the term the multiplier in national income accounting. 2  
***It is the ratio between the initial change in autonomous demand (e.g. investment) and the resultant change in equilibrium output.***
- i) Explain how the multiplier works in practice. 2  
***A given change in autonomous demand (e.g. investment) leads to a corresponding change in output (1 mark) which sets off a series of further adjustments in both output and income and in income related (i.e. non-autonomous) consumption expenditure (1 mark)***

Total 10 Marks

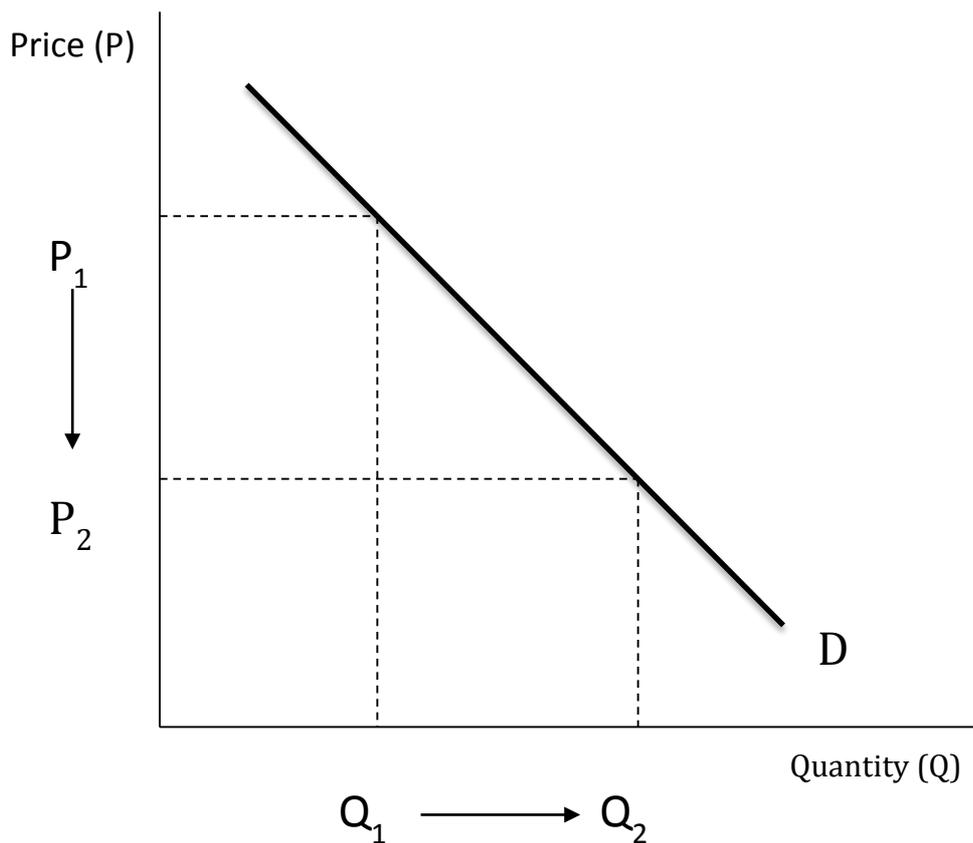
**Section B**

**Answer any TWO (2) questions from this section**

**Marks**

**Question 6**

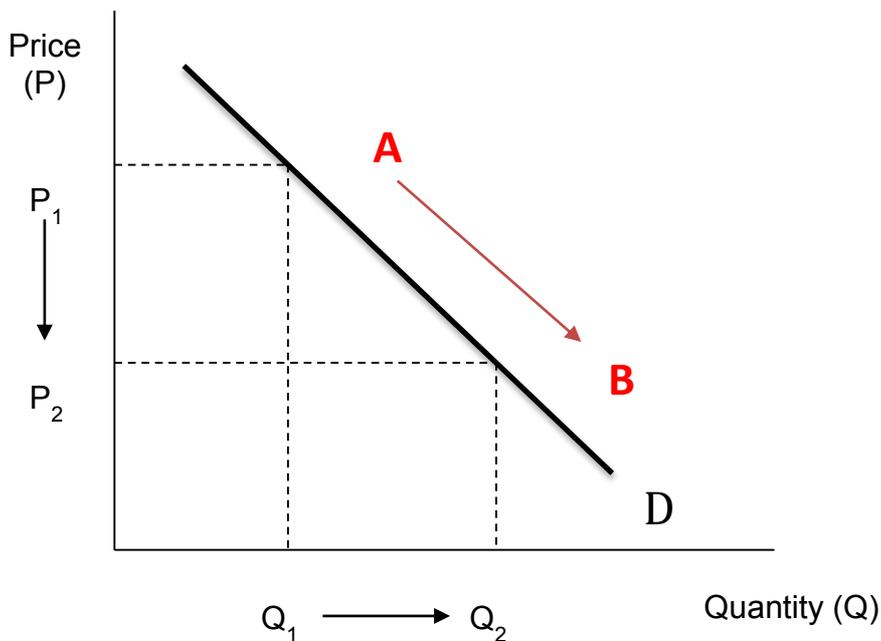
- a) Outline FIVE (5) factors affecting the demand for a product. **5**
- **The price of the good;**
  - **Income levels of consumer;**
  - **Prices of other goods (e.g. substitute and Complementary goods);**
  - **Consumer's tastes/preferences;**
  - **Social and climatic factors.**
- b) For a normal good explain what happens to demand when the price of this good falls, and identify any assumptions you are making. Draw a diagram of a demand curve to illustrate this. **7**
- Everything else remaining unchanged, (1 mark) as the price of a good rises less will be demanded (1 mark), and if the price falls more will be demanded (1 mark).**



**Axes correctly labelled (2 marks), correct curve (2 marks)**

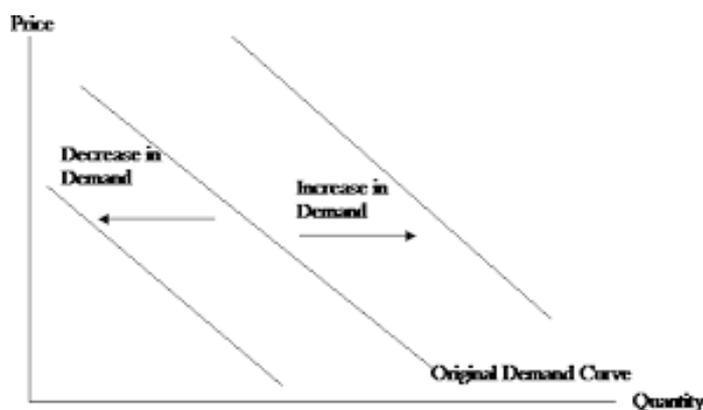
- c) Explain the difference between a movement along the demand curve and a shift of the demand curve. Use diagrams and examples to illustrate your answer. **Changes in price cause movement along the line, the demand curve. (2 marks)**

*(Illustrated diagram as below, axes correct (2 marks), curve (1 mark), illustration of price and quantity changes (1 mark))*



**Changes in any other factor cause shifts of the demand curve (2 marks)**

*(Illustrated diagram as below, axes correct (2 marks), curves (2 mark), illustration of price and quantity changes (1 mark))*



**Total 25 Marks**

## Question 7

- a) Industries are divided into categories according to the degree of competition that exists between the firms within the industry.
- i) Outline FIVE (5) alternative market structures along this spectrum of competition. 10
- **Perfect competition** - describes markets such that no participants are large enough to have the market power to set the price of a homogeneous product. (2 marks)
  - **Monopolistic competition** - a market structure in which many firms sell products that are similar but not identical. (2 marks)
  - **Oligopoly** - a market structure in which a few firms dominate. When a market is shared between a few firms, it is said to be highly concentrated. Although only a few firms dominate, it is possible that many small firms may also operate in the market. (2 marks)
  - **Duopoly** - is a specific type of oligopoly where only two producers exist in one market. In reality, this definition is generally used where only two firms have dominant control over a market. (2 marks)
  - **Monopoly** a single firm supplies a particular good or service, and that firm can charge whatever price it wants because consumers have no alternatives and it is difficult for would-be competitors to enter the marketplace. (2 marks)
- ii) Identify THREE (3) ways of distinguishing between these market structures. 3
- **How freely firms enter the industry.**
  - **The nature of the product.**
  - **The firm's degree of control over price. (1 mark for each).**
- iii) Explain what is meant by the term *natural monopoly*, why this can be desirable and provide an example of a natural monopoly. 6
- **An industry in which one firm can supply the entire market at a lower price than two or more firms (2 marks).**
  - **It is most efficient for production to be permanently concentrated in a single firm rather than contested competitively (2 marks)**
  - **Examples include: public utilities such as water services and electricity (2 marks).**
- b) Distinguish between the terms monopoly and monopoly power. 6
- **Monopoly is frequently used in terms of a pure monopoly, i.e. the firm is the industry (2 marks)**
  - **Monopoly (market) power refers to a situation where abnormal profits are being made and the extent of that is measured by the extent of price minus costs (2 marks)**
  - **Monopoly power can be exercised in oligopolistic markets (2 marks)**

Total 25 Marks

## Question 8

- a) Explain the following THREE (3) macroeconomic terms:
- i) Output 2  
**Output: usually measured by GDP per capita. This is the market value of the final goods and services produced in an economy in a given year.**
  - ii) Growth 2  
**Growth: this is percentage annual increase in output. It is also sometimes calculated quarterly.**
  - iii) Recession 2  
**Recession: this is defined as (at least) two consecutive quarters of negative growth.**
- b) Explain the following three macroeconomic terms:
- i) Exchange rate of a currency 2  
**The rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in terms of another currency**
  - ii) Balance of payments 2  
**This is the difference in total value between payments into and out of a country over a period.**
  - iii) Real GDP per capita 2  
**This is the output level recalculated to take account of the RPI.**
- c) In a three sector closed economy, identify the three agents involved and their role within this circular flow. 10
- **Households - Purchasers of goods and services (1 mark). Provide labour services (1 mark). Owners of firms (1 mark)**
  - **Firms - Provide income (1 mark). Provide goods and services (1 mark). Purchasers of goods and services (1 mark).**
  - **Government - Purchaser of goods and services (1 mark). Provider of goods and services (1 mark). Transfers income (1 mark). Owner of firms (1 mark).**
- d) In a three sector open economy highlight three withdrawals from this circular flow. 3
- **Net savings: income that households choose not to spend. (1 mark)**
  - **Net taxes: money paid to government e.g. VAT and Income tax. (1 mark)**
  - **Import Expenditure (M): Consumption of imported goods, profits go abroad. (1 mark)**

Total 25 Marks

## Question 9

- a) Distinguish between the sole trader, partnership and limited company as legal forms of organising a business. 10
- **Sole trader – i.e. a business owned by a single individual. (1 mark) They get the revenue from trading and are responsible for all losses. (1 mark)**
  - **Partnership - jointly owned by two or more people (1 mark), sharing profits and jointly responsible for any losses(1 mark); usually partners' liability is unlimited i.e. a single partner can be held liable for all losses (1 mark)**
  - **Limited company - company has legal existence separate from that of its owners i.e. shareholders; (1 mark) shareholders own part of the company as a result of buying 'shares' in it; (1 mark) they earn a return from their shares in the form of dividends and capital gains; (1 mark) shareholder liability for losses is limited to the value of the shares they own; (1 mark) a limited company is run by directors who are accountable to the shareholders (1 mark)**
- b) In terms of an individual firm, distinguish between the two types of accounts that firms report. 4
- **Flow accounts e.g. the profit and loss account – more recently called an income statement (this measures the value of flows over time of revenues and costs) (2 marks)**
  - **Stock accounts e.g. the balance sheet (this measures the net value of the stock of assets and liabilities a firm has at a given point in time) (2 marks)**
- c) Using the concept of unpaid bills, distinguish between revenue and cash flow in the income statement and the problem this can create for the firm. 6
- **The correct economic definition of revenue and cost in a given year refers to cost and revenues arising from activities during that year, whether or not payments have yet been made. (2 marks)**
  - **If a firm has yet to receive payment for some goods it sold last year its profit will include the revenue to be received even though its cash flow last year did not include it. (2 marks)**
  - **If customers pay slowly a profitable firm may have cash flow problems, in terms of struggling to pay short-term debts (2 marks)**

- d) Explain separately the concepts of depreciation and inventories and their accounting treatment.

**Depreciation**

- *When firms use a capital asset (one which lasts more than a single year e.g. a machine) depreciation is the value of the machine used up that year. (1 mark)*
- *It is not a cash outflow but adjusts the value of the machine. (1 mark)*
- *It has no effect on cash flow but it is an economic cost ( i.e. it is part of the cost of producing the year's output) so affects the level of profit that year. (1 mark)*

**Inventories**

- *Production and sales usually do not happen together. E.g. some production in a year may not be sold till next year and in the meantime is - held as a stock of inventory. (1 mark)*
- *If so the cost of that production will count in next year's income statement when the goods are sold; so the cost of production is reflected in this year's cash flow but does not affect profit till next year. (1 mark)*

Total 25 Marks

## Question 10

- a) Explain why banks don't need to keep all of their deposits as sight deposits. 6
- **People deposit their money with banks via: sight deposits, (which can be withdrawn on demand e.g. current accounts and time deposits, (which face a delay before being capable of being withdrawn ) (2 marks)**
  - **Banks reasonably assume that people will not wish to withdraw all their money at the same time. (1 mark) This allows them to have a portfolio of assets with different liquidities rather than keeping all their assets in liquid form. (1 mark)**
  - **So banks ' asset portfolios consist typically of a very small amount of cash, some liquid assets, some less liquid assets and - most profitable of all - loans to customers (2 marks)]**
- b) Identify TWO (2) factors that influence the *money multiplier*. 4
- **the ratio of cash to bank deposits banks wish to hold (2 marks)**
  - **the ratio of cash to bank deposits the non-bank public wish to hold (2 marks)**
- c) Describe the THREE (3) items that bank profits depend upon. 3
- **interest rate paid by depositors (1mark)**
  - **interest rate paid by borrowers (1mark)**
  - **the costs of doing business (1mark)**
  - **losses/defaults on loans (1 mark)**
- (to a maximum of 3 marks)**
- d) Explain FOUR (4) methods by which central banks can influence the money supply. 8
- Award 2 marks each up to a maximum of 8 marks for any four methods:**
- **affecting the money multiplier**
  - **by imposing a minimum cash reserve ratio on banks; a higher ratio reduces the multiplier**
  - **via the discount rate i.e. the rate at which the Bank lends to banks; a higher rate will tend to lead to banks holding more precautionary balances above the required reserve ratio**
  - **affecting the monetary base**
  - **via open market operations i.e. by printing money and using it to buy bonds the Bank increases the stock of money (now called Quantitative Easing); similarly by selling bonds it can reduce it**
- e) Explain how there is interaction between the money market and the goods market. 4
- **interest rates affect the demand for goods and thus the level of output and income (2 marks)**
  - **but the level of income and output affect the demand for money and the interest rates set by the Central Bank (2 marks)**

Total 25 Marks

End of paper

## Learning Outcomes matrix

Question	Learning Outcomes assessed	Marker can differentiate between varying levels of achievement
1	4	Yes
2	2	Yes
3	1	Yes
4	3	Yes
5	3	Yes
6	1	Yes
7	2	Yes
8	3	Yes
9	1	Yes
10	4	Yes

## Grade descriptors

Learning Outcome	Pass	Merit	Distinction
Apply the basic tools of microeconomics and the theories of demand and supply	Demonstrate adequate and appropriate application	Demonstrate sound and consistently appropriate application	Demonstrate detailed and highly appropriate application
Analyse the various forms of market structure	Demonstrate adequate ability to analyse	Demonstrate ability to provide detailed and coherent analysis	Demonstrate ability to provide comprehensive, lucid analysis
Analyse the key components of macroeconomics	Demonstrate adequate ability to analyse	Demonstrate ability to provide detailed and coherent analysis	Demonstrate ability to provide comprehensive, lucid analysis
Examine the monetary policy and its effect on the economy	Provide examination of the subject with some suitable examples and references	Provide detailed examination of the subject with adequate use of appropriate references and examples	Provide consistently critical and detailed examination of the subject with innovative use of highly appropriate references