



# Answer Key

## Unit 1: Microeconomics

### Module 1: Methodology: Demand and Supply

#### 1.1.1 The Central Problem of Economics

No.	Answers	Further explanations
1	C	
2	B	For every 3 windows made, 15 gates are given up. This means that when 1 window is made, 5 gates are given up; therefore, the opportunity cost of making 1 window frame is 5 gates.
3	A	A boundary or frontier is a LIMIT.
4	B	Any point inside the production possibilities frontier is said to be inefficient because output could be greater from the economy's existing resources.
5	B	A production possibilities frontier with a bowed outward shape indicates an increase in opportunity costs as more and more of one good is produced. Moving down the production possibilities frontier, an equal quantity given up on the Y axis on each occasion yields fewer goods on the X axis.
6	D	
7	A	
8	D	The choice made is to stay at home for three days. The second best choice that has been given up is to bake 30 loaves at \$5.00 per loaf, which would result in a loss of earnings of \$150.00. The third option is 60 cakes @ \$1.00 = \$60.00. Hence, \$150.00 is the second best option given up.

No.	Answers	Further explanations
9	C	A production possibilities frontier curve that is convex to the origin reflects decreasing opportunity costs.
10	B	More of both goods is produced.
11	C	A normative statement is one that expresses an opinion.
12	A	
13	A	Bureaucratic implies complicating simple procedures.
14	C	
15	B	

### 1.1.2 The Theory of Consumer Demand

No.	Answers	Further explanations
1	A	If PED is 0.5 (50%) and the change in price is 20%, then the percentage change in quantity would be 10%.
2	D	The demand curve is horizontal at price \$3.00, so for prices above \$3.00 the quantity demanded is zero and so is revenue.
3	B	Total revenue is the same at all prices when PED is unity so the total revenue must be \$80.00 at all prices.
4	C	
5	C	
6	B	
7	A	An inferior good means that an increase in income causes a fall in demand. It has a negative YED (Income elasticity of demand).
8	D	
9	C	
10	C	An exogenous factor is outside of the model of supply and demand.
11	C	The percentage change in the price of beef is $-50\%$ and the percentage change in Qd of chicken is also negative, $-25\%$ . $CED = -25/-50 = +1/2$

No.	Answers	Further explanations
12	C	The budget line will shift to the right if the prices of both goods fall by the same proportion, while income is unchanged.
13	C	
14	A	
15	B	Note the positive change indicated by a positively sloped demand curve.

### 1.1.3 The Theory of Supply

No.	Answers	Further explanations
1	A	
2	D	This is a non-price factor of supply. Options A, B and C relate to demand.
3	B	In the long run, the SCALE (size) of production changes.
4	C	
5	A	This is the law of variable proportions (diminishing returns).
6	B	
7	D	If you draw a diagram of the three curves, MPP falls first, then APP, then TPP.
8	B	The other options refer to demand not supply.
9	B	The supply of parking spaces cannot change even if the parking rate falls.
10	C	Any supply curve which passes through the point of origin has an elasticity equal to one.
11	C	This refers to a specific tax, for example a \$2.00 tax on tobacco.
12	A	There is more time to change the fixed and variable factors.
13	B	This is a mathematical concept.
14	A	Productivity is a rate concept.

No.	Answers	Further explanations
15	C	Production is an output per period concept, for example 1000 units per week.

### 1.1.4 Market Equilibrium

No.	Answers	Further explanations
1	B	A price ceiling above the equilibrium point will raise, not lower the price.
2	A	
3	A	Consumer surplus is the area to the left of the demand curve and above the price line; and a price floor will reduce this area.
4	A	
5	A	A horizontal demand curve has no consumer surplus. (See Item 3 for a similar reasoning.)
6	B	
7	B	Rent control requires a charge which is below the equilibrium.
8	D	
9	B	If chicken is a close substitute for goat meat and prices rise, then there will be a switch to goat meat and a rightward shift of the demand curve.
10	B	The extent to which both demand and supply curves move is not known precisely so the changes in price and quantity are 'uncertain'.
11	C	It is the same as saying the difference between the market price (expenditure) and the price that people are willing to pay (utility).
12	D	
13	C	

### 1.1.5 The Theory of Costs

No.	Answers	Further explanations
1	B	

No.	Answers	Further explanations
2	A	Marginal cost is the change in total costs of producing an extra unit; for example, output =10, FC = \$20, VC = \$30; then TC = \$50.  If output changes to 11, FC stays at \$20, but VC changes to \$40. TC is then \$60 and the change in TC (MC) is equal to the change in VC and NOT FC.
3	C	It is also expressed as: Change in total cost / Change in quantity produced.
4	D	Note the change in TC to find MC is as follows:  $10 \times \$3000 = TC = \$30\,000$  $11 \times \$2900 = TC = \$31\,900$  $MC = \$1900$
5	B	
6	A	As soon as MC is greater than AVC and ATC, both AVC and ATC rise; this MUST then be the lowest point of both AVC and ATC.
7	A	Even if the company is closed for the weekend, this cost is still running.
8	C	
9	B	This is also referred to as the least cost combination formula.
10	D	
11	C	Options A, B and D relate to external economies of scale.

## Module 2: Market Structure, Market Failure and Intervention

### 1.2.1 Market Structure

No.	Answers	Further explanations
1	A	
2	A	
3	C	

No.	Answers	Further explanations
4	B	
5	B	
6	B	
7	A	
8	C	
9	B	The downward sloping linear MR curve falls twice as fast as the AR curve and bisects the x axis.
10	A	
11	D	The short run supply curve is MC above AVC, while the long run supply curve is MC above LRAC.
12	A	In the long run, a firm must cover its average costs, hence MC above LRAC is the long run supply curve.
13	A	
14	B	Equilibrium output and profit maximisation output are the same concepts.
15	C	
16	D	
17	C	
18	D	Equilibrium output is found where $MC = MR$ . Do not confuse equilibrium output with optimum output ( $MC = ATC$ ).
19	D	
20	B	
21	D	
22	C	
23	A	

No.	Answers	Further explanations
24	D	
25	D	
26	C	
27	D	
28	D	
29	C	
30	C	
31	B	
32	B	
33	A	
34	C	
35	C	A pure monopoly has 100% market share so the HHI would be $100\%^2 = 10\,000$ .

### 1.2.2 Market Failure

No.	Answers	Further explanations
1	B	Market failure can be explained in many ways. Examples include: when SMB is not equal to SMC; or if there is over- or under-production of goods and services; or a failure to achieve allocative and productive efficiency.
2	B	
3	D	
4	B	
5	A	

No.	Answers	Further explanations
6	C	
7	C	
8	D	
9	B	
10	A	
11	B	
12	C	Non-rival means that there is no competition for the good (rivalry) because it is unlimited in supply, and consuming one unit does not leave one unit LESS for others.
13	B	Adverse selection means that it is mainly those people who are at risk who apply for insurance cover, so increasing the cost of insurance for those who are not at risk and have to pay a high premium.
14	C	
15	A	

### 1.2.3 Intervention

No.	Answers	Further explanations
1	D	
2	B	
3	C	
4	D	A private good is excludable and rival because consuming one bottle of water, for example, leaves one less for others. A consumer CAN exclude others from consuming his/her product.
5	B	
6	C	



No.	Answers	Further explanations
7	B	Deregulation occurs when barriers to competition are removed, while contracting out describes the situation when the private sector is allowed to provide goods and services that were previously provided by the state sector, for example automobile inspection.
8	D	

## Module 3: Distribution Theory

### 1.3.1 The Demand for and Supply of Factors

No.	Answers	Further explanations
1	B	The Marginal revenue productivity theory (MRP) curve is the firm's demand curve for hiring labour and the marginal input cost is the wage rate. The intersection point of these two curves determines the quantity of labour hired.
2	A	Transfer earnings are represented by the area to the right of the supply curve and the equilibrium price line. This area is influenced by the elasticity of supply.
3	B	Economic rent is the area shown in the diagram to the left of the supply curve and under the price line. This area is also influenced by the elasticity of supply. (See also the answer to Item 6.)
4	D	The MRP curve is determined by $MPP \times MR$ ( $MPP =$ Marginal Physical Productivity theory and $MR =$ Marginal Revenue). A change in MPP, MR or both will cause the curve to shift to the right or left. In this case, the curve has shifted to the right.
5	A	
6	B	
7	C	
8	A	
9	B	
10	A	Increased income from higher wages has a negative (money) income effect because leisure is preferred to work.
11	B	

No.	Answers	Further explanations
12	A	The monopsonist may be a very large or the only major employer in the district.
13	B	The assumption here is that there is no organised union activity.
14	C	The VMP is the contribution of the workers to the firm's revenue.
15	A	
16	A	The profit maximising monopsonist can maximise output ( $MRP = MW$ ) but, being the sole employer, has the power to pay only the average wage and hence exploit the workers.

### 1.3.2 Wage Differentials

No.	Answers	Further explanations
1	B	
2	A	If an additional worker is paid a higher wage, the union would ensure that all workers were paid the same wage. For example, 10 workers paid \$10 an hour = \$100. If the eleventh worker is paid \$11, then all 11 workers would need to be paid at this rate, therefore $11 \times \$11 = \$121$ . The change in the total wages bill = \$21 ( $\$121 - \$100$ ). The average wage = \$11 and the marginal wage is \$21.
3	D	
4	C	The driver is 'compensated' or rewarded for performing a dangerous duty.
5	C	
6	A	When the demand and supply of labour are both inelastic, the demand and supply curves would intersect at a high wage. If both demand and supply were ELASTIC, the demand and supply curves would intersect at a low wage.
7	D	
8	B	

No.	Answers	Further explanations
9	A	In a perfectly competitive market the AR and MR for a firm are the same.
10	B	

### 1.3.3 Income Inequality, Poverty and Poverty Alleviation

No.	Answers	Further explanations
1	B	
2	B	
3	B	
4	A	A value of 1 represents a 100% unequal distribution of income and 0.9 therefore is very high. (See also Item 9.)
5	A	
6	B	
7	B	
8	B	
9	A	
10	B	Longevity refers to living a long life (life expectancy).
11	B	

# Unit 2: Macroeconomics

## Module 1: Models of the Macroeconomy

### 2.1.1 National Income Accounting

No.	Answers	Further explanations
1	B	
2	A	
3	B	Because indirect taxes increase the price of goods and services, they are subtracted from GDP. Similarly, subsidies lower prices and are added on to GDP to determine the true price.
4	A	The base year index is given a value of 100 and is a standard to which other years are compared. If in subsequent years an index exceeds 100, this means that the average price level for a selected basket of goods is increasing.
5	B	
6	B	GDP at market prices is not adjusted for indirect taxes and subsidies.
7	C	
8	D	Real GDP for 2016 is found by multiplying the quantities of goods produced in 2016 (20 and 40) by their 2015 prices (\$5 and \$3). That is $20 \times \$5 = \$100$ , and $40 \times \$3 = 120$ . Answer = \$220.
9	B	
10	D	

## 2.1.2 Classical Models of the Macroeconomy

No.	Answers	Further explanations
1	D	Classical theorists believed that the labour market is responsive to market forces and there will be an equilibrium created by the laws of supply and demand when there are labour shortages and surpluses. Unemployment therefore is voluntary.
2	C	
3	C	Whereas the Keynesian AS curve is first elastic and then inelastic, the classical AS curve is upward sloping throughout.
4	B	Supply side measures such as, for example, measures to increase the productivity of the factor markets, will shift the AS curve downward and to the right, reducing inflation and increasing real output.
5	C	When households 'supply' factors of production, they receive wages, interest, profit and rent; this income is then used to 'demand' and pay for the output of firms. Hence, supply creates its own demand.
6	A	
7	B	The quantity theory is expressed as $MV = PT$ .
8	C	
9	D	

## 2.1.3 Keynesian Models of the Economy

No.	Answers	Further explanations
1	C	
2	B	
3	D	MPC is found by calculating the gradient of the consumption function (change in C / change in Y).
4	A	APC is determined by Total consumption / Total income. Total consumption = BD. Total income / Total expenditure = AD

No.	Answers	Further explanations
5	A	Consumption is represented by $C = a + b \times Y_d$ . In the table, at zero income $C = 60$ , which is autonomous consumption. As income changes from zero to 400, the change in consumption ( $MPC = b$ ) is 80, hence $C = 60 + 0.8Y_d$ .
6	A	The MPS is expressed as Change in savings (DC) / Change in income (BC).
7	D	
8	B	Equilibrium $NI(Y)$ is operating below the full employment level ( $Y_f$ ).
9	A	Equilibrium $NI(Y)$ is operating beyond the full employment level ( $Y_f$ ).
10	C	
11	A	To determine the marginal propensity to consume (MPC), first find the MPS (MPS = Marginal propensity) to save; that is, the change in savings (\$50m) divided by the change in income (\$200m). $MPS = \$50m/\$200m = 0.25$ ; therefore, $MPC = 0.75$ since $MPS + MPC = 1$ .
12	C	
13	B	In equilibrium $C + I + G + X - M = Y$ . Substitute the figures given as follows: $\$40 + 0.5y + \$60 + \$200 + \$100 = Y$ $\$400 = Y - 0.5Y$ $\$400 = 1/2Y$ $Y = \$400/0.5 = \$800$
14	C	The Multiplier ( $K$ ) = $1 / \text{withdrawal (MPS)}$ . $1/0.5 = 2$ .
15	D	

## 2.1.4 Investment

No.	Answers	Further explanations
1	A	Unplanned investment means there are additions to stock when aggregate supply (AS) is greater than aggregate demand (AD).

No.	Answers	Further explanations
2	A	There are unplanned reductions from stock (disinvestment) due to excess aggregate demand.
3	C	
4	A	The word 'inverse' means 'opposite', so if the rate of interest is low, the rate of investment will be high, and the reverse is also true.
5	C	Changes in the rate of interest cause a movement ALONG the curve, whereas options A, B and D cause a shift of the curve upwards and to the right.
6	D	
7	D	
8	B	
9	B	
10	B	

## Module 2: Macroeconomic Problems and Policies

### 2.2.1 Unemployment and Inflation

No.	Answers	Further explanations
1	B	A deflationary gap is associated with an output level that is less than the level of full employment.
2	C	
3	A	Increased spending may cause a rise in inflation but can also cause an increase in economic growth, which reduces unemployment.
4	C	
5	C	

No.	Answers	Further explanations
6	C	Although the dotted line suggests unemployment, it is voluntary according to classical thinking.
7	A	Insufficient demand causes a fall in output, low business confidence and thereafter a fall in employment.
8	B	
9	C	
10	D	
11	B	
12	D	'Too much money chasing too few goods' means that excess demand cannot be satisfied since aggregate demand is greater than aggregate supply at the full employment level.
13	B	
14	C	If $MV = PT$ and $V$ and $T$ are constant, then any change in $M$ (25%) would elicit an equal change in $P$ (25%).
15	A	
16	B	
17	D	Options A, B and C all have an effect on the cost of production; a fall in interest rates may cause demand inflation.
18	A	A high rate of inflation causes exports to become less competitive and to decrease, causing a balance of trade deficit.
19	D	A redistributive effect is one in which one party benefits at the expense of the other. It is the government that gains in times of inflation, not taxpayers.
20	B	

### 2.2.2 Monetary Theory and Policy

No.	Answers	Further explanations
1	B	



No.	Answers	Further explanations
2	D	
3	C	The central bank is the sole authority in determining the rate of growth of the money supply, and this is fixed. The supply curve for money is therefore perfectly inelastic.
4	C	A decrease in the overnight lending rate will lower the rate of interest. The low rate is an incentive for consumers and firms to borrow and spend, leading to an expansionary monetary policy.
5	A	
6	C	The shifting of the MS curve to the left in the diagram from M to $M_1$ raises interest rates from $r$ to $r_1$ ; this curbs consumer spending, which is the cause of the inflation.
7	B	
8	C	
9	A	The sale of securities to the commercial banks reduces their bank deposits, reduces the money supply and raises the interest rate.
10	C	

### 2.2.3 Fiscal Policy

No.	Answers	Further explanations
1	B	
2	A	The graph shows that in Year 1, government expenditure is greater than tax revenue; hence the policy being pursued is a budget deficit.
3	A	
4	D	
5	B	When government spending is greater than tax revenue, it results in a budget deficit and is a fiscal stimulus to an economy in recession.
6	A	When government expenditure is less than tax revenue it results in a budget surplus, and so removes an inflationary gap.

No.	Answers	Further explanations
7	C	Equal amounts of government expenditure and tax revenue result in the balanced budget multiplier, which is equal to 1.
8	C	
9	C	
10	A	
11	A	A budget surplus reduces government spending and hence demand inflation.

## 2.2.4 The Public Debt

No.	Answers	Further explanations
1	D	
2	C	A rise in the average price level occurs with an increase in government borrowing.
3	B	A budget surplus can be used to service the national debt.
4	D	
5	C	It is the extent of export earnings that shows the country's ability to repay debt. Do not confuse the debt service ratio with the debt ratio. A could also be a correct answer, due to its close similarity to option C.
6	B	
7	A	
8	D	
9	C	

## Module 3: Growth, Sustainable Development and Global Relations

### 2.3.1 Growth and Sustainable Development

No.	Answers	Further explanations
1	C	Producing at point W enables the production of more capital goods, which can then be used to produce more capital AND consumer goods.
2	B	
3	B	
4	D	The non-replacement of renewable resources will result in shortages for future generations.
5	B	
6	C	
7	A	A value of 0 indicates a low level of economic development and economic welfare.
8	C	
9	A	Real growth is adjusted for inflation.
10	D	

### 2.3.2 International Trade

No.	Answers	Further explanations
1	B	
2	D	
3	D	A country achieves comparative advantage producing goods at a lower opportunity cost than another country.
4	A	(i) Guyana has an absolute advantage in vegetables (300) compared to Jamaica (150); (ii) Jamaica has a comparative advantage in vegetables, (1 veg = 1/2 fruit); (iv) Guyana has a comparative advantage in fruits (1 fruit = 2 veg).

No.	Answers	Further explanations
5	B	The price in Antigua will rise causing the price in the US to fall.
6	D	
7	C	
8	A	
9	B	As long as export prices are above imports in any form, the terms would be favourable.
10	C	

### 2.3.3 Balance of Payments and Exchange Rates

No.	Answers	Further explanations
1	C	
2	D	
3	A	Exchange rates controls limit the supply of foreign exchange available, and expenditure on imports will fall.
4	C	Investments and other capital flows are part of the capital account. Exports – imports = \$50 billion. Net transfers = \$25 billion. Current account balance = \$75 billion.
5	D	A devaluation makes the price of exports cheaper and this makes exports more competitive, causing an inflow into the current account in the balance of payments.
6	C	A low rate of inflation relative to trading partners will make exports competitive and would be very likely to result in a balance of payments surplus.
7	B	Both quotas and tariffs raise import prices and switch the demand from imports to local goods and services, which become cheaper.
8	B	An expenditure-reducing measure targets consumer spending. An increase in interest rates will reduce the demand for foreign exchange to purchase imports.
9	C	

No.	Answers	Further explanations
10	B	
11	C	
12	B	C would also be a correct answer, as it is another effect of appreciation.
13	B	If the exchange rate is \$TT5 = \$US1, the TT dollar is $\frac{1}{5}$ the value of a US dollar (= US 20 cents). If the TT dollar depreciates to \$TT10 = \$US1, the TT dollar is now worth only US 10 cents, making exports cheaper and having a positive effect on exports.
14	B	

### 2.3.4 Economic Integration

No.	Answers	Further explanations
1	B	The common external tariff is the difference between a free trade area and a customs union.
2	B	
3	A	Before the country became a member of the customs union, it might have traded with a lower price producer than members in the customs union. The low price trading partner is now excluded from membership and must pay a common external tariff.
4	C	
5	D	
6	D	
7	D	
8	A	Barriers to trade limit competition and lead to inefficiency, loss of competitiveness and exports markets.
9	C	
10	B	

### 2.3.5 International Economic Relations

No.	Answers	Further explanations
1	C	If the WTO had not been formed to ensure free trade, there would have been a poor distribution of resources throughout the world.
2	A	The efforts of the IMF and the WTO complement each other in global trade and foreign exchange earnings.
3	C	
4	C	
5	A	
6	B	
7	A	
8	C	
9	C	