Study Unit 1

What Economics is all about

Economics is a social science that studies how people use **scarce** resources to satisfy their **unlimited** wants. Microeconomics looks at this at an individual, household or firm level while Macroeconomics is a broader look which is an aggregate of all the individuals, households and firms in a given economy. The main aspects in Microeconomic theory are **supply**, **demand**, **scarcity**, **choices** and **opportunity cost**.

The Economic Problem

Every individual has a set of needs and wants that they seek to satisfy. Some are important for day-to-day living, such as food, water, clothing, shelter and health care. In Economics these are termed **needs.** Some of the things that the human being wishes to accumulate are not really necessary for a living. He/she can do without. Examples include sports cars, jewellery, fancy clothing and luxurious accommodation. These are termed **wants.** Our needs and want are never ending, yet the means to satisfy them are limited in supply. Hence the economic problem, "*how to satisfy these never ending wants and needs, given limited resources*". This is the basis of Economics.

Scarcity

Almost every resource on this planet comes in limited supply. Money, housing, time, food, labour, machinery, cars all come in limited quantities such that we can`t all get everything that we need to satisfy our needs and wants. This limit in supply and availability brings another important principle in Economics, that of **scarcity**.

Opportunity Cost and Choice

Opportunity cost is one of the very important concepts in Economic theory. It`s very important to note that opportunity cost depends on individuals as people value alternatives differently. Opportunity cost is the *value* of the *next (second)* best *alternative forgone* or sacrificed when a certain choice is made. The existence of scarcity brings up the concept of opportunity cost when a choice is made. Because our wants and needs are unlimited/endless, and the resources to satisfy them are limited, this leaves us with no option but to make choices between competing alternatives. For example, consider money, a resource which is available in very limited supply, yet used to satisfy an endless list of unlimited needs and wants. If let's say you have R1 000 for use and you choose to use R500 on airtime, it automatically leaves you with R500 for use on other competing needs. When determining opportunity cost of any choice made it is very important to rank your *alternatives* in order of preference, from the most preferred to the least preferred. Take Tebogo for example. On a Saturday morning he has the following options that he ranked in order of preference:

1) Work
2) Study
3) Do Laundry
4) Chat
5) Watch Soccer
6) Do Shopping
7) Sleep

Based on the above, Tebogo`s opportunity cost of Work will be Studying. His opportunity cost of Studying will be Laundry, and that of Laundry will be Chatting. The opportunity cost of Chatting will be the Soccer forgone. Note that every time the opportunity cost will be the *value* of the next best alternative forgone, not the values of all the alternatives forgone.

The Economic Problem

All authorised decision makers are faced with the questions to do with **what** to produce amongst the (limited) competing goods and services that satisfy unlimited needs and wants. Should we erect more hospitals or build more schools, use the land to construct factories for production of cars and computers or instead use that land for farming to produce maize, wheat and milk? After the *what* question has been answered, the **how** to produce question has to be addressed. Should we employ more labour or more capital? Now that we have decided to use that land for farming, how should we produce that maize, wheat and milk? After we have answered that, we have one more question to answer, **for whom** to produce? Should we produce the maize, wheat and milk according to the people`s needs. Say a family of 4 gets 100kg of maize, 50kg wheat and 20 litres of milk per month while a family of 6 gets 150kg of maize, 70kg wheat and 8litres of milk or should we produce only for those who can afford?

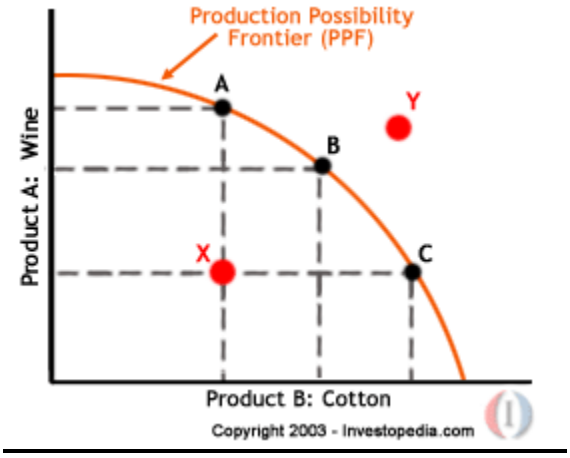
Production Possibility Curve/Frontier

A production possibility curve is a graph/boundary line that emphasizes the concept of opportunity cost and choice further. It shows the various combinations of two goods/commodities that can be produced in an economy using the same fixed amount of input/resources with a given level of technology. This schedule shows that there are limits I production so an economy must decide the combinations of goods and services to be produced to achieve efficiency. It follows from the premise that (because of scarcity), allocation of resources to the production of one good will automatically reduce the amount of resources left for production of the other good.

Take an example of an economy that can produce only wine and cotton. All the points on the PPF (points A, B and C) represent **efficient** use of resources. Point X represent an **inefficient** use of resources, while point Y represent unattainable production levels (with the given resources) at least in the short run.

- All points **on the curve** show **efficiency** and represent full utilization of resources, while those **under** the curve/frontier indicate **inefficiency** represent underutilization use of resources. Those points **above** the curve are **in-achievable** or simply not feasible.

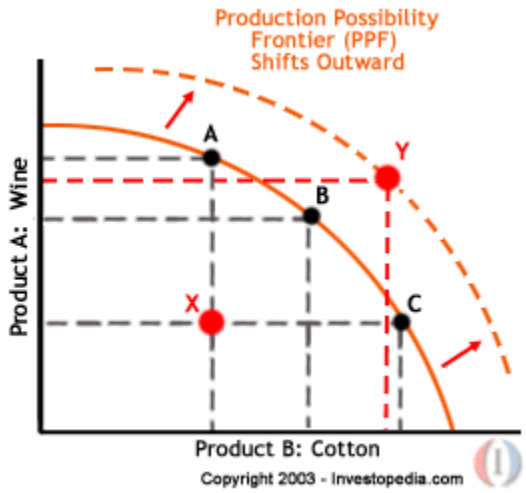
Production Possibility Frontier



As can be seen, for the economy to produce more wine, it must give up (sacrifice) some of the resources it uses to produce cotton. If it decides to produce more cotton, it must divert some of the resources from wine production and consequently reduce the amount of wine produced. If

more wine is in demand, the **opportunity cost** of producing those extra units of wine will be proportional to the decrease in cotton production

Shifts and Swivels of the PPC (Production Possibility Curve)



Supposed there in an increase in technology in the economy, and the time taken to pick up the grapes and cotton has been significantly reduced. This means more grapes and cotton can be produced (with a given level of land, labour and capital). This will cause the PPC to shift outward as shown by the new dotted PPC. When this happens, we know there is growth in the economy, as point Y (which earlier had been impossible) will now be attainable and represent efficient use of resources. More output, reduced unemployment (increased employment), better living standards. A movement of the PPC inwards would represent a dwindling economy and this will result in a fall in output.

The Production Possibility Curve will **shift outwards** under the following scenarios:

- Improvements in Productivity and Efficiency from the available factor resources
- Increases in the productive potential following improvements in technology. This may emanate from a specific industry, but the effects may be felt in several related industries (positive spill-over effect).
- Exploitation of more factors of production (Capital and Labour) available for the production process

The PPC will **swivel** outwards if the society learns to get better at producing (increase productivity) only one of the two goods. This would swivel the curve out along the axis of that good.

Positive and Normative Statements

Whenever you are reading newspaper articles, listening to news reporters or friends in a constructive argument, it is important to note the difference between **objective** statements and **subjective** statements.

When a particular individual or group has a particular argument to make, they will include subjective statements about what **ought** to happen, or what should happen, depending on the individual`s opinion. These are **value judgements,** usually partially or wholly lacking objectivity. These are called **Normative** statements, and are very difficult to prove right or wrong as they represent an individual`s opinion. Examples include:

- Inflation is the most serious economic problem
- Unemployment is more harmful than Inflation
- Resources are best allocated by letting the Market (Price) Mechanism work freely without Government intervention
- The Government should make the minimum wage rate R6 000 per month
- The tolling fees for improving the road infrastructure should be collected via a fuel levy
- The Government should impose a 20% tax on high sugar content foods to combat obesity

On the other hand, **Positive** statements can be tested, amended and/or rejected by referring to some evidence. Positive statements deal with **objectivity** and are facts which are prone to testing for acceptance or rejection. Examples are:

- An increase in income will result in rise in demand for normal goods
- Strengthening of the rand against other currencies will worsen our Balance Of Payments deficit
- Higher interest rates will lead to an increase in the inflation rate
- If the Government raises a tax on beer, this will lead to fall in profits for the brewers
- A rise in average temperatures will lead to an increase in the demand for ice cold products

Past Exam Practice Questions

May/June 2011

1 Economics may be defined as

[1] the empirical testing of value judgements through the use of logic.
[2] the use of policy to refute facts and hypotheses.
[3] the social science concerned with how society manages its scarce resources.
[4] a study of how limited resources can be used to satisfy limited wants.

2 Microeconomics is concerned with

[1] positive economics but not normative economics.
[2] an overall view of the operation of the economic system.
[3] the study of the demand, supply and prices of individual goods and services.
[4] the combined decisions of all firms in South Africa.

3 The three major flows in the economy are

[1] total production, total investment and total spending.
[2] total spending, total income and total production.
[3] total production, total spending and total savings.
[4] total income, total savings and total consumption.

4 Assume that your neighbour pays R5 000 per month for a personal loan while you pay R2 000 per month for yours. Suppose your neighbour's instalment increases by 2 percent while yours increases by 5 percent.

Which **one** of the following options is **correct**?

[1] Your neighbour's instalment increase in rand terms is less than yours.
[2] Your neighbour's instalment increase in rand terms is more than yours.
[3] Your neighbour's instalment increase in rand terms is the same as yours.
[4] None of the options is correct.

5 An economic system

[1] requires a grouping of private markets linked to one another.
[2] is the organisation of production, consumption and distribution to answer the basic economic questions.
[3] requires a centralised authority (such as government) to coordinate economic activity.

[4] is a plan or scheme which allows a firm to make profit at some other firm's expense.

6 Opportunity cost is best defined as

[1] the monetary price of any production resource.
[2] the amount of labour that must be used to produce one unit of any product.
[3] the ratio of the prices of goods imported to the prices of goods exported.
[4] the amount of one product that must be given up to produce one more unit of another product.

Use Table 1 below to answer questions 7 and 8.

Table 1

Combination	Pencils	Pens
A	0	16
B	6	14
C	8	11
D	10	7
E	12	0

7 Assume that one pencil costs 25 centsand one pen costs 50 cents. The opportunity cost of producing the eighth pencil in money terms when moving from combination B to C is

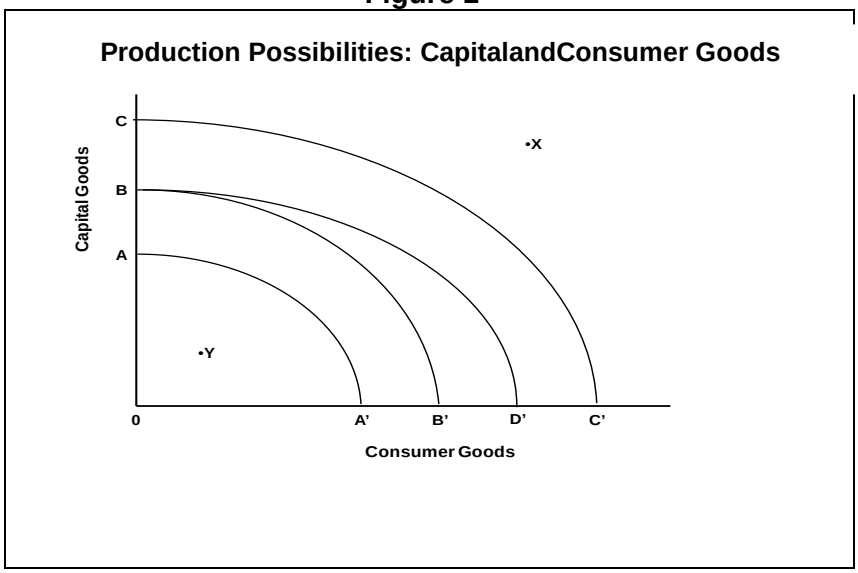
[1] 25 cents.
[2] 50 cents.
[3] 75 cents.
[4] R1.

8 The opportunity cost of increasing the production of pens from 7 to 14 units is _____ pencils.

[1] 2
[2] 4
[3] 6
[4] 8

Use the production possibilities curve below to answer questions 9 and 10. Each question starts with BB' as the country's production possibilities curve.

Figure 1



9 Assume that there is a major technological breakthrough in the consumer goods industry, and the new technology is widely adopted. Which curve in the diagram would represent the new production possibilities curve?

[1] BD'
[2] AA'
[3] CC'
[4] BB'

10 Assume that the government bans the use of technology and modern production techniques in all industries. Which curve in the diagram would represent the new production possibilities curve?

[1] BD'
[2] AA'
[3] CC'
[4] BB'

Suggested Solutions May/June 2011

1	Option 3	Economics is a social science that studies how man allocates scarce resources towards satisfying unlimited needs. Don't be confused with option 4 which talks about **limited wants**
2	Option 3	
3	Option 2	Refer to textbook page
4	Option 3	▪ Neighbour`s instalment increase: R5 000*0.02=R100 ▪ You instalment increase: R2 000*0.05=R100
5	Option 2	There are 3 economic systems: Command, Market and Mixed. All systems seek to organise production, distribution and consumption as efficiently as possible to answer the basic economic problem (**What** to produce, **how** to produce and **for whom** to produce)
6	Option 4	Refer above on opportunity cost
7	Option 3	Opportunity cost: ½ (14-11) * R0.50 =R0.75
8	Option 2	Opportunity cost = 10-6 =4 pencils
9	Option 1	Read up on 'swivel of the PPC'. A swivel is caused when there is an improvement in the production of only one of the 2 goods. The PPC swivels, pivoted at the good without production improvements
10	Option 2	The ban will cause a drop in overall economic output, i.e. a fall in the production of both

		goods

November 2011

1. Economics is the study of how

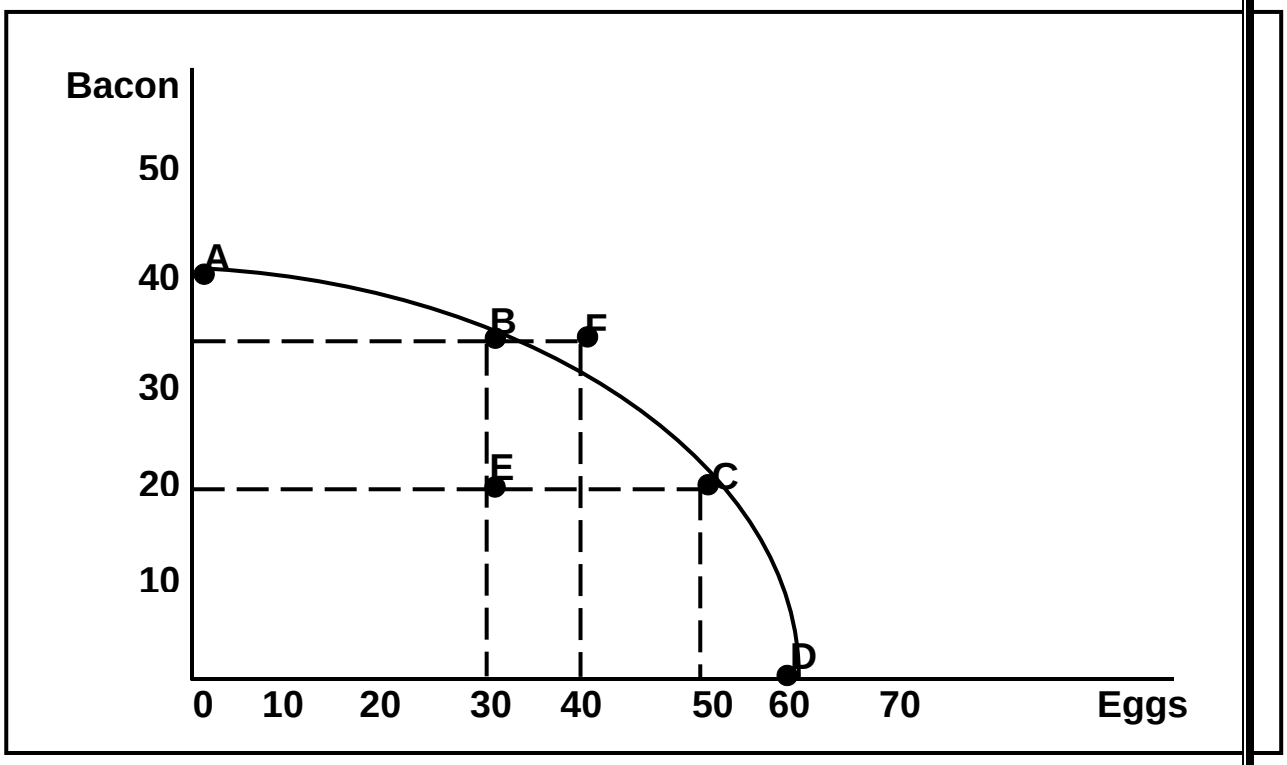
   [1] to fully satisfy our unlimited wants.
   [2] society manages its scarce resources.
   [3] to reduce our wants until we are satisfied.
   [4] to avoid having to make trade-offs.

2. Points on the production possibilities curve (PPC) are

   [1] efficient
   [2] inefficient
   [3] unattainable
   [4] normative

Use figure 1 below to answer Questions 3-5.

Figure 1



3. If the economy is operating at Point C, the opportunity cost of producing an additional 15 units of bacon is

[1] 10 units of eggs.
[2] 20 units of eggs.
[3] 30 units of eggs.
[4] 40 units of eggs.

4. If the economy were operating at point E,

[1] the opportunity cost of 20 additional units of eggs is 10 units of bacon.
[2] the opportunity cost of 20 additional units of eggs is 20 units of bacon.
[3] the opportunity cost of 20 additional units of eggs is 30 units of bacon.
[4] 20 additional units of eggs can be produced with no impact on bacon production.

5. Point F represents

[1] a combination of production that can be reached if we increase the production of eggs by 20 units with the current resources available.
[2] a combination of production that is inefficient because there are unemployed resources.
[3] a combination of production that can be reached if technology becomes outdated.
[4] None of the above.

6. Which of the following statements represent(s) macroeconomic issues?

a. Whether the production possibility curve shifts outward over time.
b. Whether the economy is operating on the production possibility curve or inside it.
c. The choice whether to produce more televisions than radios or more radios than televisions (in other words, where to produce on the production possibility curve).

[1] Statements a & c
[2] Only statement b
[3] Statements a & b
[4] Only statement c

7. Which of the following statements represents positive statements?

a. The best policy is one that will maximize the rate of economic growth for the country.
b. Government policies give higher priority to curing inflation than to curing unemployment.
c. If the government gave higher priority to curing unemployment, that would be popular with the electorate.

[1] Statements a & c
[2] Only statement b
[3] Only statement c

[4] Statements b & c

November 2011 Suggested solutions

1	Option 2	Economics is a social science that studies how man/society allocates/manages **scarceresources** to **satisfy** his **unlimited needs**
2	Option 1	Refer above on the Production Possibility Curve
3	Option 2	Moving from point B to point C implies giving up 20 units of eggs. Remember point F is unattainable given the available resources
4	Option 4	The economy can just fully employ resources in the production of eggs without having to sacrifice bacon production. Note that this is only possible if the economy is producing below full capacity
5	Option 4	All points above the PPC are **not possible**
6	Option 3	
7	Option 2	Note the objectivity in this statement. It is the easiest to prove right or wrong with some given evidence or statistical data

May/June 2012

1. In microeconomics, we study _____.

   i the production of a single product
   ii the consumer price index
   iii the decisions of individual firms or businesses
   iv the combined outcome of all firms in South Africa

   [1] None of the above
   [2] Only (i) and (iii)
   [3] Only (ii) and (iv)
   [4] Only (i), (ii) and (iii)

2. What does normative economics involve and on what is it based?

   [1] Positive statements; facts
   [2] Recommendations; personal value judgments
   [3] Positive statements; values
   [4] Opinions; facts

3. Which of the following represent a flow variable(s)?

   i The balance in a savings account
   ii A firm's monthly income
   iii The gold reserves held by the South African Reserve Bank
   iv Profit earned by the firm during the course of the year

   [1] Only (i) and (iii)
   [2] Only (ii) and (iv)
   [3] Only (i), (ii) and (iii)
   [4] All of the above

4. Which of the following statement(s) is/are **correct**?

A capitalist market economy is characterized by _____.

i private ownership of the factors of production
ii economic decisions are made predominantly through the market with limited government intervention
iii decentralized decision making that rests with the owners of the factors of production
iv economic decisions that are made by individual households and firms, with a large presence of the government in the economy

[1] Only (i) and (ii)
[2] Only (ii) and (iv)
[3] Only (i), (ii) and (iii)
[4] All of the above

5. The opportunity cost of a good is _____.

[1] the time lost in finding it
[2] the quantity of other goods sacrificed to obtain another unit of that good
[3] the expenditure on the good
[4] the lack of opportunity to buy a good

6. A household is _____.

[1] the unit that employs factors of production to produce goods and services that are sold in the goods market
[2] the basic productive unit in the economy
[3] the basic decision-making unit in the economy
[4] primarily engaged in production

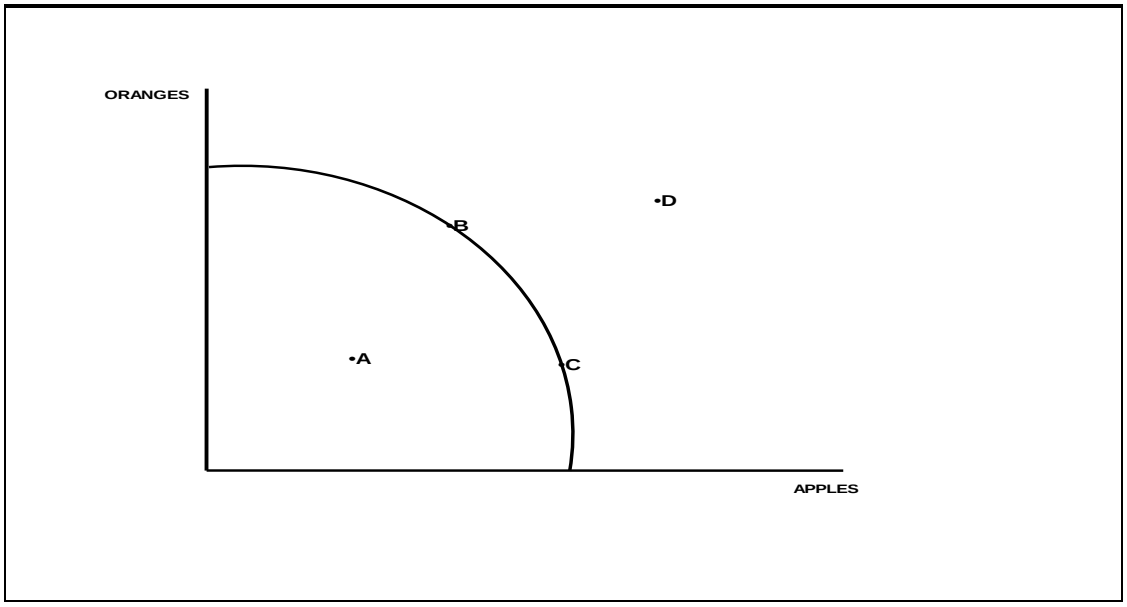
7. Which of the following statement(s) is/are **correct?**

i The circular flow of income and spending is a monetary flow.
ii The circular flow of income and spending is in the same direction as the flow of goods and services.
iii The circular flow of income and spending is in a opposite direction to the flow of goods and services.

[1] None of the above
[2] Only (i) and (ii)
[3] Only (i) and (iii)
[4] All of the above

Use figure 1 to answer questions 8 and 9.

Figure 1



8. **Point B** on the production possibility frontier (PPF) **correctly** indicates the point of

[1] inefficient allocation of resources.
[2] scarcity.
[3] attainable but inefficient resource allocation.
[4] attainable and efficient resource allocation.

9. The movement from point B to point C on the PPF reflects

[1] scarcity.
[2] opportunity cost.
[3] unlimited wants
[4] correct resource allocation

Suggested solutions May/June 2012

1	Option 2	
2	Option 2	Read up on the descriptions of Positive and Normative statements
3	Option 2	
4	Option 3	Option iv talks about a “large” presence of the Government in the Economy. That explains a Command Economy instead
5	Option 2	More sensible option
6	Option 3	Textbook page
7	Option 3	Textbook page
8	Option 4	Refer to PPC above
9	Option 2	Movement from point B to point C shows the amount of oranges that have to be given up if the economy decides to increase production of apples. This is the opportunity cost of Apples

November 2012

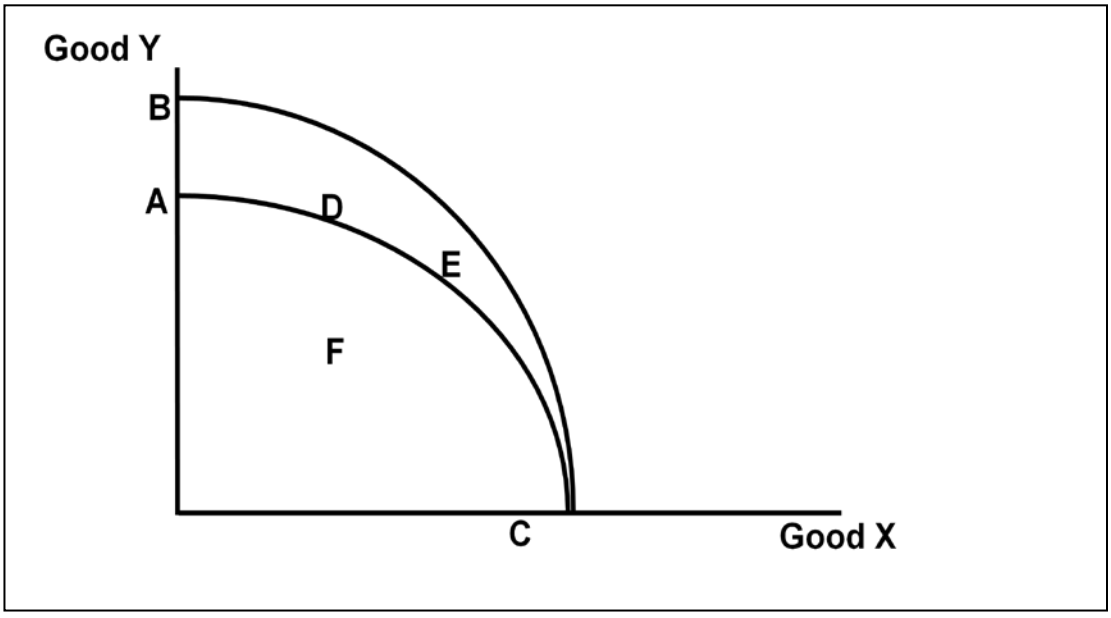
1. Which of the following statements is/are **correct**?

   a. "Unemployment is the only important economic problem in South Africa" is an example of a normative statement.
   b. Scarcity is a problem in poor countries only.
   c. 40% (per cent) of 100 is greater than 76% of 50.

   [1] All the statements are correct.
   [2] Only a and b.
   [3] Only b and c.
   [4] Only a and c.

Use figure 1 below, which indicates the maximum combinations of good X and good Y that can be produced with available resources, to answer Questions 2 and 3.

Figure 1



2. On production possibility frontier AC

[1] output combinations D and E represent full and efficient use of resources, but A, C and F represent inefficient resource use.
[2] output combinations A, D, E and C all represent full and efficient resource use.
[3] output combination A and C represents less efficient resource use than either D or E.
[4] the production of goods X and Y require similar factor inputs in similar proportions.

3. The outward shift of the production possibility frontier from AC to BC could arise from

[1] technological progress that affects good X production and good Y production equally.
[2] an improvement in labour productivity only in the industry producing good X.
[3] an improvement in labour productivity only in the industry producing good Y.
[4] a reallocation of resources from product X production to product Y production.

4. Which of the following statements is/are **correct**?

a. Production is a stock and income is a flow.
b. The total number of motor vehicles manufactured in South Africa in 2011 is a stock variable.
c. The monthly expenditure of a household is a flow variable.

[1] All the statements are correct.
[2] Only c.
[3] Only b and c.
[4] Only a.

Suggested solutions November 2012

1	Option 4	
2	Option 2	All the points on the PPC represent **full and efficient** use of resources
3	Option 3	Labor productivity would be benefiting only the industry I which Good Y fall, while Good X`s industry does not realize any improvements. This is a swivel as discussed above, **not a shift**
4	Option 3	Textbook page

Study Unit 3: The interdependence between the major sectors, markets and flows in the mixed economy

The 3 major flows in an economy are:

- Income
- Spending
- Production

The Circular of Income and Spending

A model is a simplified way of explaining a complicated concept. In the circular flow model, the basic decision makers/consumers (households) and producers (firms) are demonstrated in an interlinked fashion.

Households buy goods and services in the **goods market** (Households spend on the goods market)**,** while firms buy factors of production in the **factor market** (Firms spend on the factor market)**.** Households then offer their factors of production (land, labour, capital and entrepreneurship) on the factor market and in turn get i**ncome** in the form of (profits, rent, wages etc.)Remember a market does not necessarily need to be a physical place like Tshwane Market, it can just be a set-up which allows for the interaction of buyers and sellers (Kalahari.com, online stock trading)

Households

These consist of individual people, a group of friends sharing a dwelling, or a family living under the same roof. The key element is that households make decisions that are mutually agreed upon. They are considered as single decision makers.

Firms

These are economic units formed by profit seeking entrepreneurs who employ factors of production (land, labour and capital) to produce goods and services for sale and consumption by households. They are the basic producing units in an economy.

Injections

Injections in the circular flow model represent **additions** to the current flow of income. Major injections are household borrowings, investment by firms, government expenditure, exports (represent income to the exporter)

Leakages

Leakages represent **withdrawals** reductions in the current flow of income. Major leakages are taxes, savings (part of the income which is not consumed) and imports (spending on foreign products)

Past Exam Practice questions

Please note there are no relevant questions on this topic in the following past exam papers:

- May 2011
- November 2011

May/June 2012

Paper provided at the end of the booklet

Suggested solution May/June 2012

6	Option 3	Read up under Households
7	Option 3	Look on the diagrams for the circular flow model

November 2012

6. Which of the following options is **incorrect**?

[1] The three major flows in the economy are total production, total income and total spending.
[2] There are two sets of markets in a simple economy: goods markets and factor markets.
[3] Firms are buyers in goods markets and sellers in factor markets, while households are buyers in factor markets and sellers in goods markets.
[4] In the simple circular flow of economic activity, “real” flows of goods and factors, and financial flows move in opposite directions.

7. Which of the following statements is/are **correct**?

a. Demand refers to plans of households, not events that have already occurred.
b. A change in the price of potatoes will result in a change in the quantity of potatoes demanded.
c. The market demand curve is the horizontal sum of all the individual demand curves.

[1] All the statements are correct.
[2] Only a and b.
[3] Only b and c.
[4] Only a and c.

Suggested solutions November 2012

6	Option 4	
7	Option 3	

Study Unit 4 & 5: Demand, Supply and Prices & Demand and Supply in action

Demand

Demand represents a set of quantities of goods and services that would be purchased per each given price level. It is the amount of goods and services consumers are **willing** and **able** to buy per given period of time.For demand to be effective, willingness and ability (financial means to purchase) have to be present.

An Economics student must be able to distinguish between Demand and Quantity demanded. While *demand* illustrates a set of alternative quantities demanded at each and every price level, *quantity demanded* refers to the quantity that is demanded at a specific price.

The following is an example of a demand schedule for Albany Bread:

Price (Rand per loaf)	Quantity Demanded (Loaves of Bread)
20	**2**
16	**6**
12	**10**
8	**14**
6	**18**

The Law of Demand

The law of Demand states that **the higher the price** of a good/service, the **lower the quantity demanded,** *ceteris paribus (*all else equal, holding other things constant)**.** The opposite is true. This implies an inverse relationship between the price of a good and the quantity demanded of that good. The **downward sloping** demand curve illustrates this relationship

Two reasons why the relationship between price and quantity demanded is inverse:

- Substitution effect (If the price of a piece of KFC chicken increases relative to that of Chicken Licken (ceteris paribus), consumers would shift to buying more Chicken Licken, causing the demand for KFC chicken to drop)
- Income effect (If the price of a piece of KFC chicken increases, this reduces the buying power/purchasing power of KFC lovers, consequently reducing the amount of chicken pieces they will afford to buy.

Factors of Demand

Anything that causes the demand to change (other than the price of that good), will cause a shift or change in the demand for that good. These factors are the “other things” which we held constant while we were defining demand in the beginning.

The following are some of the major factors of demand:

- Consumer`s income
- Consumer`s taste and preference
- Prices of related products. These can be
  - Substitutes (e.g. Hp Laptop and Dell, Bread and rolls, Tea and coffee0
  - Complements (e.g. Toothbrush and Tooth-paste, Bread and Butter, Tyres and Rims, Pen and Paper)
- Consumer price expectations
- Population size
- Weather

The list is endless. All these factors will cause a shift in the demand schedule, new quantities will be demanded at a given price level.

Supply

As with demand, supply represents a set of quantities of goods and services that can be produced or supplies at each and every price level. Producers` reactions to price levels are captured by this schedule.

The following is an example of a Supply schedule for Sasko bread:

Price (Rand per loaf)	Quantity Demanded (Loaves of Bread)
20	**18**
16	**14**
12	**10**
8	**6**
6	**2**

The law of Supply

The law of supply states that **the higher the price**, the **higher the quantities** of goods and services producers are willing to supply *ceteris paribus*, and the opposite holds truth.

The law of supply reveals the **positive relationship** between the price of a good and the quantity supplied of that good. Thus the supply curve is upward sloping. This is also demonstrated by the behaviour of our supply schedule shown above.

The student should again distinguish between Supply, which is a set of alternative goods and services supplied at each and every price level while the Quantity supplied refers to a quantity that is supplied at a specific price.

Factors of Supply/Causes of changes in Supply

The following are factors of supply. A change in any of these factors will cause the supply schedule to shift to a new higher/lower level:

- Input prices (fuel, labour, electricity, raw materials)
- Number of sellers
- Increase/decrease in government subsidies
- Producer expectation of the price level
- Weather

Exam Practice questions

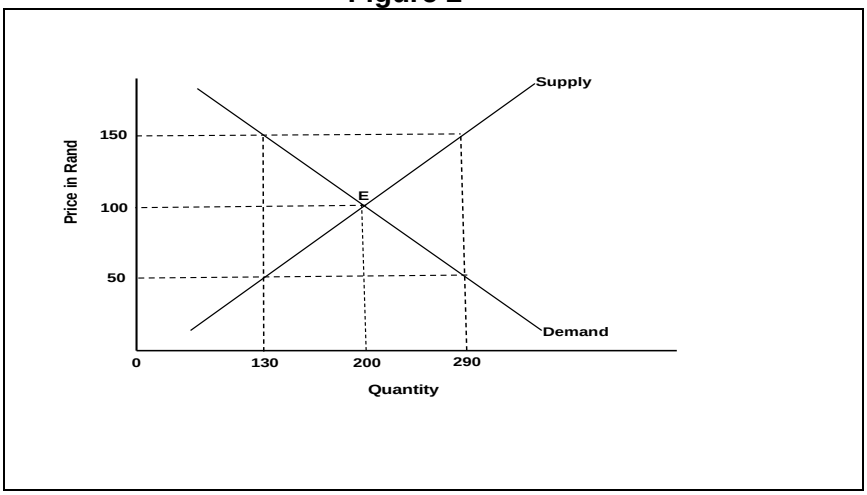
May/June 2011

11 The law of demand states that

[1] prices and quantity demanded are inversely related, *ceteris paribus*.
[2] the larger the number of buyers in the market, the lower the market price.
[3] prices and quantity demanded are directly related.
[4] consumers will buy more of a product at higher prices than at lower prices.

Use the graph below to answer questions 12 and 13.

Figure 2



12 At a price of R50 there will be

[1] an excess demand of 290.
[2] an excess supply of 130.
[3] an excess demand of 160.
[4] no excess demand or excess supply.

13 At equilibrium price and quantity, total consumption expenditure is

[1] R13 000.
[2] R20 000.
[3] R29 000.
[4] R30 000.

14 The supply of potatoes will decrease if there is

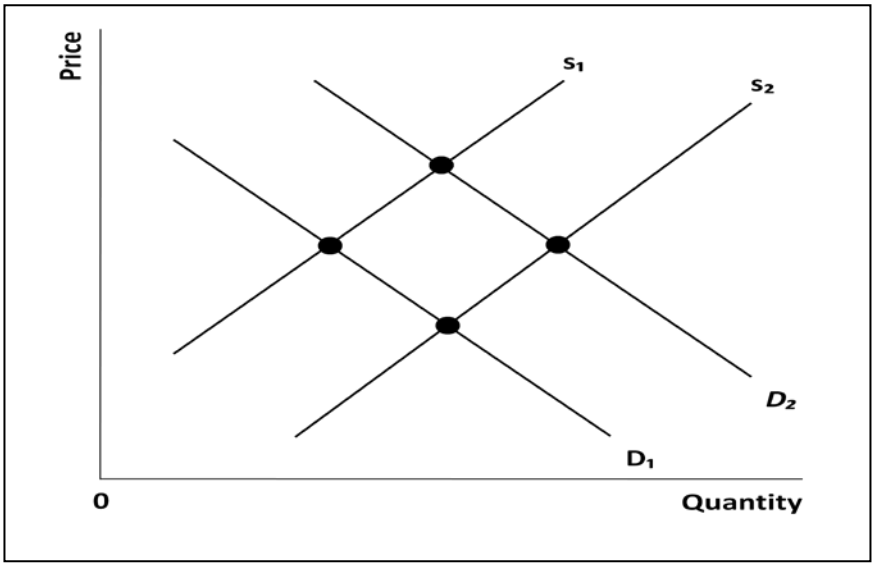
[1] an improvement in farming technology.
[2] a decrease in the wages of farm workers.
[3] a removal of a subsidy paid by the government to farmers.
[4] a decrease in the price of potatoes.

15 If the price of coffee, a substitute for tea **in consumption**, increases, we would expect the equilibrium quantity of tea to

[1] decrease.
[2] increase.
[3] stay the same.
[4] be indeterminate.

Use the figure below to answer questions 16 and 17.

Figure 3



16 Suppose Figure 3 represents the market for oil. Because of the development of new deep-sea drilling technology, the

[1] demand curve will shift from D_1 to D_2 while the supply curve will not shift.
[2] demand curve will shift from D_1 to D_2 and the supply curve shift from S_1 to S_2.
[3] demand curve will not shift, and the supply curve will shift from S_2 to S_1.
[4] demand curve will not shift, and the supply curve will shift from S_1 to S_2.

17 Suppose Figure 3 represents the market for French fries in a fast-food shop. If the price of potatoes rises and people become at the same time concerned that French fries can lead to an increase in "bad" cholesterol, then

[1] the demand curve for French fries will shift from D_2 to D_1 while the supply curve of French fries will not shift.
[2] the demand curve for French fries will shift from D_2 to D_1 and the supply curve of French fries will shift from S_2 to S_1.
[3] the demand curve for French fries will shift from D_2 to D_1 and the supply curve of French fries will shift from S_1 to S_2.
[4] the demand curve for French fries will not shift and the supply curve of French fries will shift from S_1 to S_2.

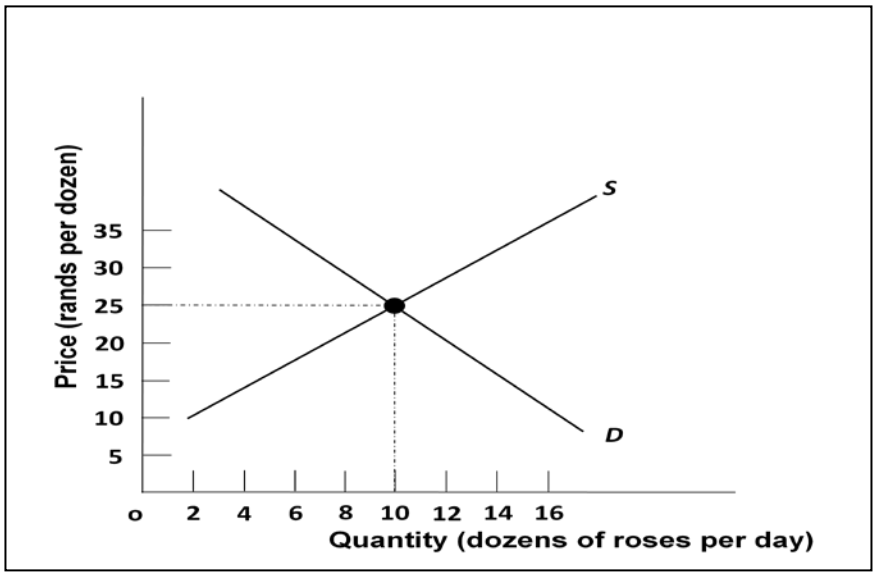
18 Which of the following is likely to occur if a market is not in equilibrium?

[1] The demand curve will shift to bring the market to equilibrium.
[2] The supply curve will shift to bring the market to equilibrium.
[3] The price will adjust to bring the market to equilibrium.
[4] Both [1] and [2] are correct.

19 In Figure 4, a price of R20 per dozen of roses would result in a ____ so that the price of roses will have to ____.

[1] surplus; rise
[2] surplus; fall
[3] shortage; rise
[4] shortage; fall

Figure 4



20 Suppose the price of a litre dairy milk falls, which **one** of the following could be a possible cause?

[1] An increase in the price of soya milk, which is a substitute in consumption for dairy milk.
[2] A discovery that dairy milk causes diabetes.
[3] An increase in the income of the average household, with milk being a normal good.
[4] A drought that reduces supplies of feed grains fed to cows that produce milk.

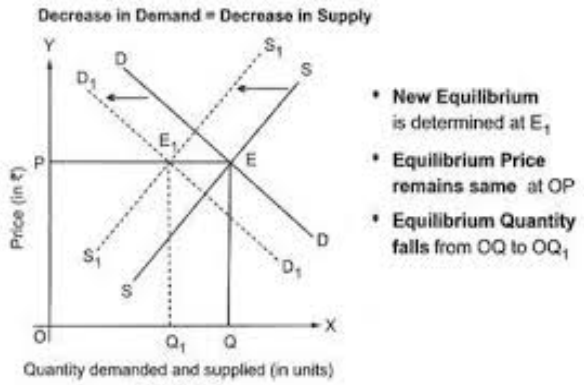
21 Assume that beef and leather are complements **in production**. The price of beef increases because of a decrease in the supply of beef, *ceteris paribus*.

[1] The demand curve and the supply curve of leather will shift.
[2] The supply curve of leather will shift to the right with an accompanying decrease in the equilibrium price and an increase in the equilibrium quantity of leather.
[3] The supply curve of leather will shift to the left with an accompanying increase in the equilibrium price and a decrease in the equilibrium quantity of leather.
[4] The demand curve of leather will shift to the left with an accompanying increase in the equilibrium price and a decrease in the equilibrium quantity of leather.

22. Assume that leather belts and leather shoes are substitutes **in production**. If people's style changes in favour of leather belts, the supply curve of leather shoes will shift

[1] leftward and the equilibrium price of leather shoes will fall.
[2] leftward and the equilibrium price of leather shoes will rise.
[3] rightward and the equilibrium price of leather shoes will fall.
[4] rightward and the equilibrium price of leather shoes will rise.

Suggested solutions May/June 2011

11	Option 1	
12	Option 3	At a price of R50, Demand exceeds Supply by (290-130) 160
13	Option 2	Total expenditure = Price*Quantity =200*100 =20000
14	Option 3	Note that option 4 decreases the **quantity supplied** and **not** the **supply**
15	Option 2	Price of coffee ↑, Quantity demanded for coffee ↓, consumers shift to a relatively cheaper substitute (tea), Demand for tea ↑
16	Option 4	Technological breakthrough is not a Factor of demand, but it is a factor of Supply hence it will increase only the supply
17	Option 2	Potato prices represent a cost to the producer. An increase in costs of production suppress production, shrinking (reducing) supply. at the same time, the consumer`s health concern will reduce their demand (*ceteris paribus*)  Fig. 11.10
18	Option 3	Price signals bring markets into equilibrium
19	Option 3	Prices below the equilibrium result in a shortage (excess demand) while those above result in a surplus. When there is a shortage, consumers bid up the price, putting pressure on the price to rise When there is a surplus, producers are desperate to sell their extra produce, exerting downward pressure on the price
20	Option 2	Dairy milk consumers will cut on their milk intake, causing a fall in the demand for dairy

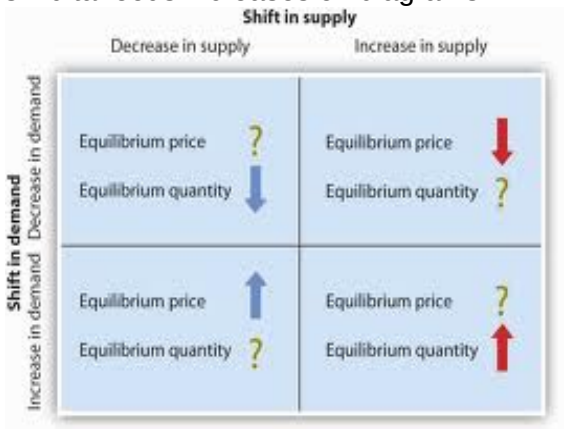
		milk
21	Option 3	Less production of one good leads to a fall in production of the other and vice versa
22	Option 2	Producers would shift resources (leather) into the production of the substitute (leather belts), increasing the supply of the more preferred product (leather belts) and reducing the supply of the less preferred leather shoes. ↓ in supply increases the price and ↓ quantity

November 2011

Paper provided at the end of the booklet

Suggested solutions November 2011

8	Option 2	Read on the law of demand
9	Option 1	↑ Price of Dolce& Gabanna causes a fall in the quantity demanded of dolce & Gabanna. Consumers shift to the relatively cheaper substitute (Roxy)
10	Option 1	
11	Option 4	Check on the factors of Supply
12	Option 1	Fill in all the missing values An excess supply of 45 means Supply is greater than demand by 45. 55 is greater than 10 by 45. Excess supply always puts downward pressure on the price
13	Option 2	Same explanation as above
14		
15	Option 4	Producers will manage to sell all since consumers will be demanding more than what the producers can supply
16	Option 2	Demand for gasoline will fall as more fuel efficient cars will make the motorist make less frequent trips to the fuel station
17	Option 2	This decision will limit the amount of oil available to the rest of the world, thereby ↓ supply
18	Option 2	Price of sugar ↑, lowering sugar quantity demanded, decreasing the Demand for the complement (Coffee), resulting in ↓ price for coffee
19	Option 1	Draw and represent the increases and decreases in supply and demand
20	Option 1	Normal good- Income ↑, consumption ↑ too and vice versa (e.g. computers, bread, cars) Inferior good- Income ↑, consumption ↓ and vice versa (e.g. cabbage, second hand goods)
21	Option 4	Steel prices in the bicycle production represent a cost of production. Higher costs lead to price increases.

22	Option 1	The popularity of gardening books causes an increase in demand,↑ the book price. Higher printing costs are a cost of production to the book publisher, further pushing up the price. Draw the simultaneous increases on diagrams 
23	Option 3	Same explanation as above
24	Option 2	The discovery makes people want to consume more coffee to relieve colds, increasing coffee demand. Brazil and Vietnam will increase the supply of coffee, stiffening the price. Definitely quantities have increased but the opposite price movements have uncertain results
25	Option 1	This reduces the demand for chocolate, no effect on the supply

May 2012

Paper provided at the end of the booklet

Solutions to May/June 2012

10		
11	Option 3	P Dvd↑,Quantity supplied of Dvd↑, suppliers will divert their resources from the production of the substitute (which is now less relatively profitable). This will cause the supply of Cds to decrease
12	Option 3	P grape juice↓, Quantity demanded ↑, Demand for the substitute (wine) ↓
13	Option 3	Increase in the cost of production will lead to a decrease in Supply
14	Option 4	
15	Option 3	An increase in the cost of harvesting cotton is an increase in the cost of production, which shifts the supply curve upwards(leftwards), raising the equilibrium price
16	Option 3	Read up on the difference between Demand and Quantity demanded
17	Option 3	An increase in the price of a substitute (scones) causes the demand for donuts to increase
18	Option 2	We need to know if good X and good Y are either substitutes or compliments i.e. the relationship between the two goods
19	Option 1	Only the price changes of a good cause movements along the supply/demand schedule

20	Option 2	
21	Option 1	
22	Option 4	Pepsi and Coca Cola are substitutes, if P of Pepsi ↑, Qd of Pepsi ↓, thereby ↑ D (shifting the Demand curve rightwards)for Coke
23	Option 4	Draw and represent on a Demand and Supply diagram
24	Option 4	Draw the movements step by step
25	Option 3	Same step as above

November 2012

7. Which of the following statements is/are **correct**?

d. Demand refers to plans of households, not events that have already occurred.
e. A change in the price of potatoes will result in a change in the quantity of potatoes demanded.
f. The market demand curve is the horizontal sum of all the individual demand curves.

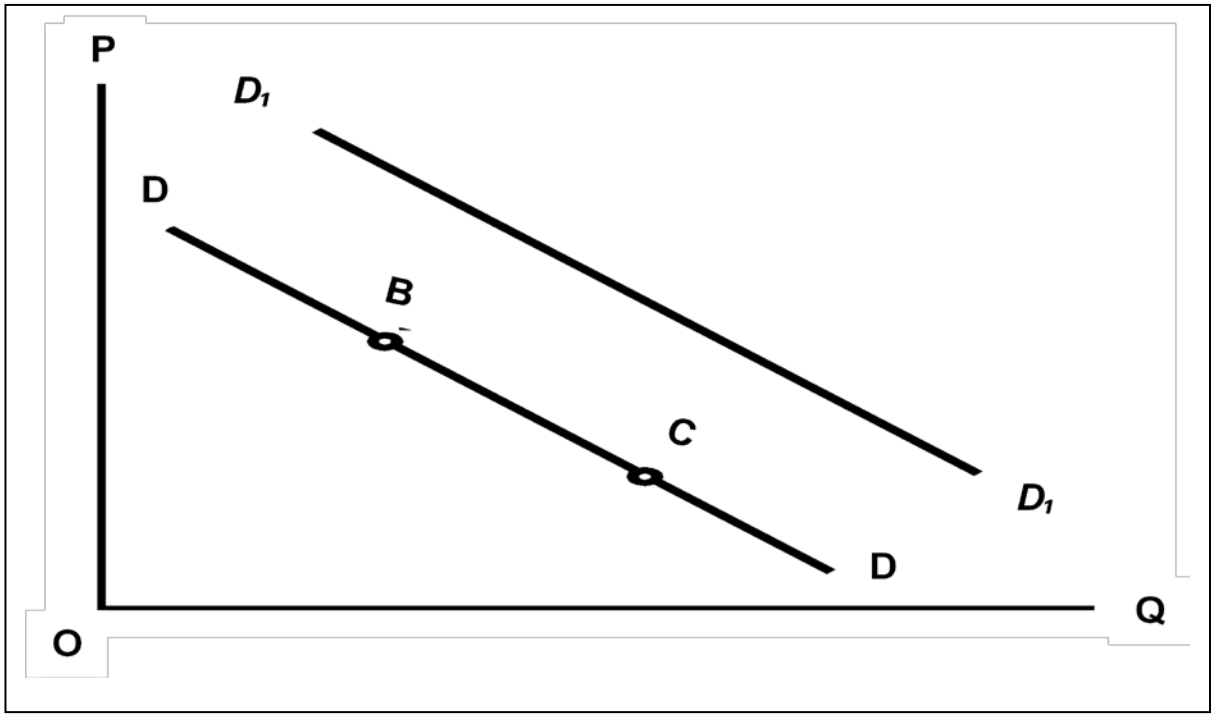
[1] All the statements are correct.
[2] Only a and b.
[3] Only b and c.
[4] Only a and c.

8. Which of the following options is **incorrect**?

[1] The demand for a product refers to the quantities of the product that potential buyers are willing and able to buy.
[2] The demand for a product depends, amongst others, on the availability of the product.
[3] A change in the price of potatoes will result in a change in the quantity of potatoes demanded.
[4] If A and B are complements, a fall in the price of A will lead to an increase in the demand for B, *ceteris paribus*.

Question 9 is based on figure 2 below.

Figure 2



9. Which **one** of the following options is **correct**?

[1] A movement from point B to point C indicates an increase in demand.
[2] A shift of curve DD to D_1D_1 indicates a decrease in demand.
[3] An increase in the quantity demanded is indicated by the movement from point B to point C.
[4] A change in a supply factor will shift the demand curve DD.

10. Which of the following statements is/are **correct**?

a. An increase in the price of cool drink XYZ will result in an increase in the supply of cool drinkXYZ.
b. An increase in the price of any of the factors of production will result in an upward (or leftward) shift of the supply curve.
c. An increase in the wages of workers at the Volkswagen factory in Uitenhage will result in a movement along the supply curve of Volkswagens, *ceteris paribus*.
d. In their supply decisions, producers take account of the prices of all the alternative products they can produce.

[1] All the statements are correct.
[2] Only b and d.
[3] Only b and c.
[4] Only a, b and d.

11. If there is a relative rise in the price of broccoli, a substitute in agricultural production for beans, then

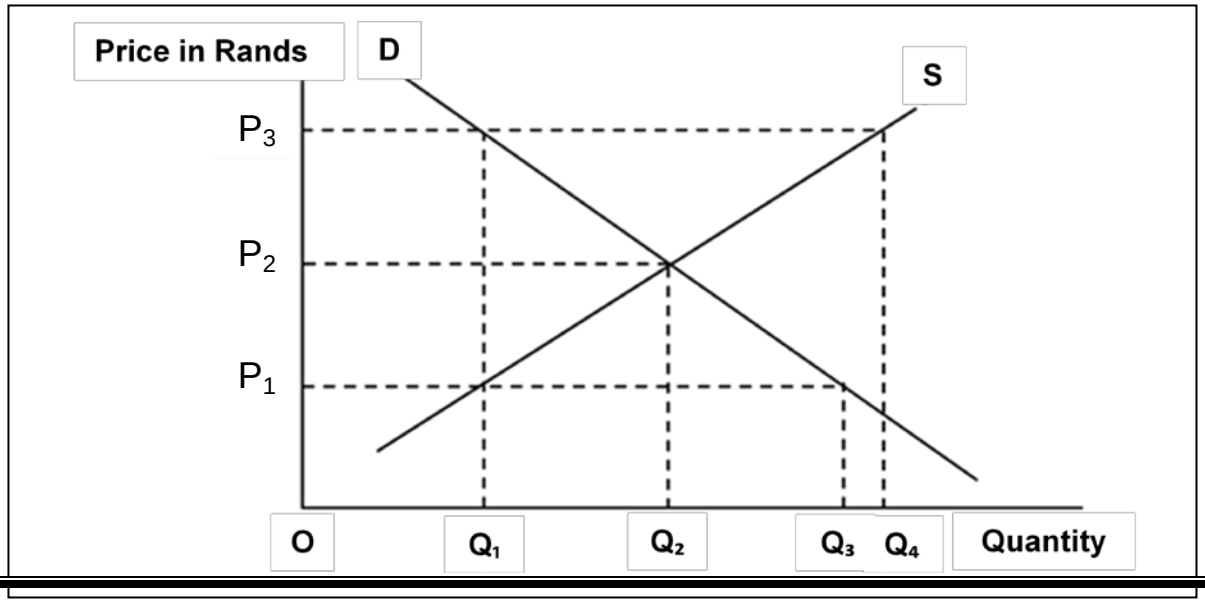
[1] the supply curve for beans will shift to the left.
[2] the supply of beans will increase.
[3] the supply curve for broccoli will shift to the left.
[4] there will be no effect on the production of beans.

12. Which **one** of the following will shift the supply curve to the right, *ceteris paribus*?

[1] An increase in the demand of the product concerned, which will cause an increase in production.
[2] An improvement in production technology.
[3] An increase in the price of the factors of production.
[4] An increase in the price of the product concerned.

Use figure 3 below to answer question 13.

Figure 3



Q_1 Q_2 Q_3 Q_4

13. At price P_3 in figure 3,

[1] the market is in equilibrium.
[2] there will be a tendency for prices to rise.
[3] there will be a surplus of $Q_4 – Q_1$.
[4] the quantity traded is Q_4.

14. Which of the following statements is/are **correct**?

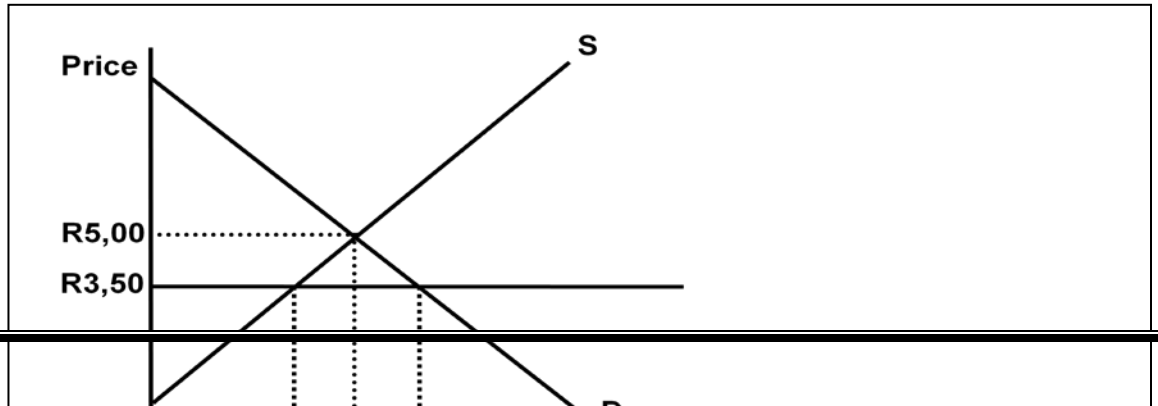
a. A market can only be in equilibrium if demand is equal to supply.
b. Excess demand for a good will put downward pressure on the price of the good.
c. The allocative function of prices means that prices can ration the scarce supply of goods and services.

[1] All the statements are correct.
[2] Only b and c
[3] Only c
[4] Only a and b

Use figure 4 below to answer question 15.

The diagram below shows the market for brown bread.

Figure 4



15. If the price of brown bread is fixed at R3,50 per loaf thenthere will be a

    [1] surplus of 80 loaves.
    [2] shortage of 50 loaves.
    [3] shortage of 80 loaves.
    [4] surplus of 50 loaves.

16. If demand for coffee decreases as income decreases, coffee is

    [1] a complementary good.
    [2] an inferior good.
    [3] a substitute good.
    [4] a normal good.

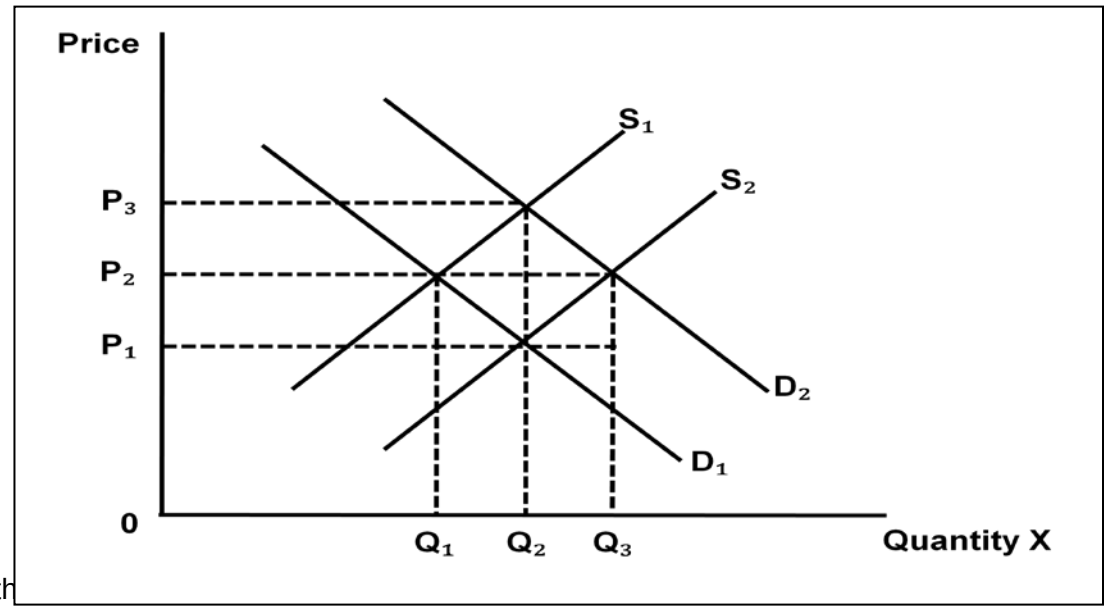
17. If both supply and demand for a good increase at the same time, which of the following must also increase?

    [1] The equilibrium price.
    [2] The equilibrium quantity.
    [3] Both equilibrium price and quantity.

[4] All of the above options.

Questions 18 to 20 are based on figure 5 below.

Figure 5



18. If th

[1] OP_2 and OQ_3.
[2] OP_1 and OQ_2.
[3] OP_2 and OQ_1.
[4] OP_3 and OQ_2.

19. If the demand curve shifts from D_1 to D_2, one could say that

[1] the quantity demanded has decreased to Q_1 and price has fallen to P_2.
[2] the price of a good which is a substitute for X must have fallen.
[3] there had been an increase in demand for good X.
[4] the higher price of good X has caused the quantity demanded to fall from OQ_1 to OQ_2.

20. A shift in supply from S_2 to S_1 might be caused by

[1] the rising costs of producing good X.
[2] a decrease in the price of good X.
[3] a decrease in demand for good X.
[4] an improvement in the technology of producing good X.

21. Suppose there is an increase in both supply and demand for personal computers. Furthermore, suppose the supply of personal computers increases more than demand for personal computers. In the market for personal computers, we would expect the

    [1] equilibrium quantity to rise and the equilibrium price to rise.
    [2] equilibrium quantity to rise and the equilibrium price to fall.
    [3] equilibrium quantity to rise and the equilibrium price to remain constant.
    [4] equilibrium quantity to rise and the change in the equilibrium price to be ambiguous.

22. When government imposes a price floor below the market price, the result will be that

    [1] shortagesoccur.
    [2] surpluses occur.
    [3] supply and demand will shift up to the new equilibrium.
    [4] a price floor set below the equilibrium price will have no effect on the market equilibrium.

23. Which of the following options is **correct**?

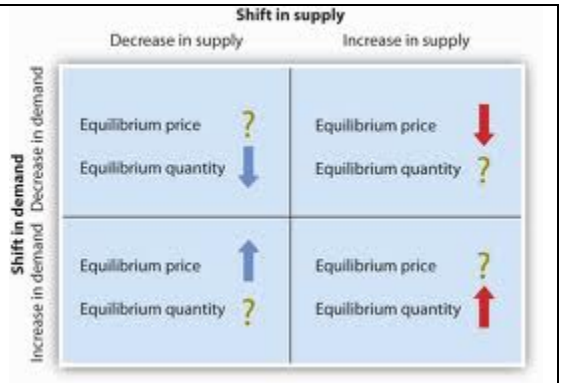
    [1] If the demand for a product is inelastic, a change in price will cause total revenue to change in the opposite direction.
    [2] If the demand of a product is inelastic, a change in price may cause total revenue to change in either the opposite or the same direction.
    [3] If the demand for a product is inelastic, a change in price will cause total revenue to change in the same direction.
    [4] The price elasticity coefficient applies to demand, but not to supply.

24. The price of burgers increases by 20% and the quantity of burgers demanded falls by 23%. This indicates that demand for burgers is

    [1] unitary elastic.
    [2] inelastic.
    [3] perfectly elastic.
    [4] elastic.

Suggested Solutions November 2012

7	Option 1	
8	Option 2	Product availability is not a factor of Demand
9	Option 3	
10	Option 2	The question is testing the student`s knowledge of the difference between Supply/Demand and the Quantity Supplied/Quantity Demanded
11	Option 1	P of Broccoli ↑, quantity of broccoli supplied ↑,producers will ↓ supply of substitute product (beans)
12	Option 2	Read on the factors of supply
13	Option 3	
14	Option 3	
15	Option 3	Shortage = 180-100 =80
16	Option 4	Read on normal goods
17	Option 2	Draw the simultaneous increases graphically

		
18	Option 3	
19	Option3	
20	Option 1	Factors of supply cause the supply schedule to shift
21	Option 2	Draw the increases on the diagram
22	Option 2	
23	Option 3	
24		

Study Unit 6: Elasticity

Elasticity measures the responsiveness of one variable with respect to changes in another related variable. It captures the percentage change in variable that is brought about by a percentage change in another related variable.

Price Elasticity of Demand

Price elasticity of Demand measures the percentage change in quantity demanded brought about by **one** percentage change in Price measures as follows:

Ẽ= Percentage change in Quantity demanded/Percentage change in Price

Ẽ= %Δ Qd/%ΔP

Properties of Price elasticity

- Price elasticity of demand is usually a negative number because of the inverse relationship between the price of a product and its quantity demanded
- Price elasticity **> 1** indicate **price elastic** demand (e.g. those goods with close substitutes)

- Price elasticity **< 1** indicate **price elastic** demand (e.g. goods with fewer substitutes/basic necessities like water, electricity, basic clothing)
- Price elasticity **= 1** indicate **unitary** elasticity
- Price elasticity **= 0** show no relationship between Price and Quantity demanded, (vertical demand curve)
- Price elasticity = ∞ indicate infinity elasticity (horizontal demand curve)
- A linear demand curve has different elasticities along it, with elasticity of **-∞** (elastic) at the top portion, and elasticity of **0** at the bottom

Income Elasticity of Demand

Income elasticity of Demand measures the percentage **change in demand** brought about by a **one** percent **change in Income**.

Properties of Income elasticity

- **Positive** income elasticity indicate the good is a **normal good** (demand increases as income increase/demand decreases as income decreases)
- **Negative** income elasticity indicate the good is an **inferior good** (demand increases as income falls/demand falls as income increases). Examples are second hand goods, cabbage, public transport e.t.c

Cross Price Elasticity of Demand

Cross price elasticity of Demand measures the percentage change in **demand** for **good X** brought about by a one percentage change in **the price** of **good Y.**

Properties of Cross elasticity

- If good X and Good Y are **substitutes**, cross price elasticity is **positive**
- If good X and Good Y are complements, cross price elasticity is **negative**

Past Exam Practice

May/June 2011

23 If the coefficient of the price elasticity of demand is 5,0, then a 10 percent increase in price will result in a ____ decrease in the quantity demanded.

[1] 2 percent
[2] 5 percent
[3] 10 percent
[4] 50 percent

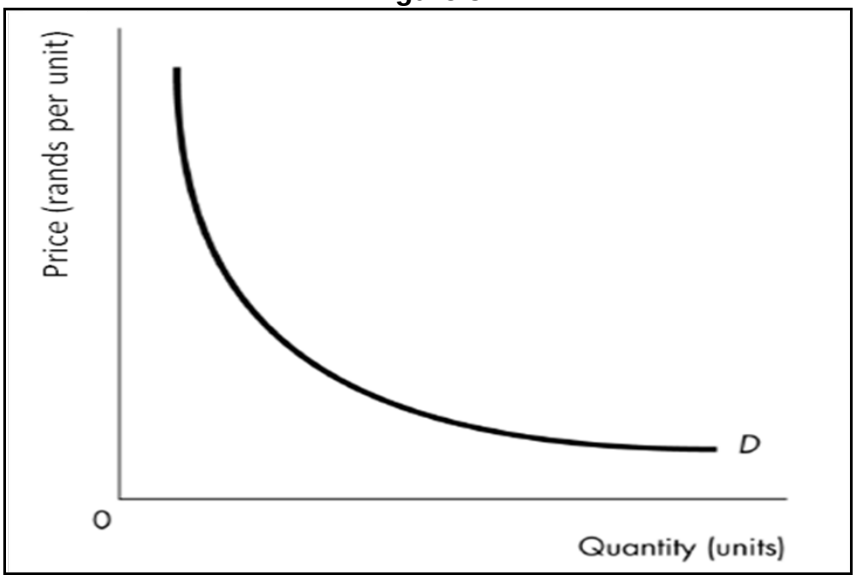
24 Suppose that the coefficient of the price elasticity of demand for cigarettes is 0,4. If government wants to reduce smoking by 10 percent, by how much should it raise the price of cigarettes?

[1] 10 percent
[2] 20 percent
[3] 25 percent
[4] 50 percent

25 The demand curve in Figure 5 illustrates the demand for a product with

[1] zero price elasticity of demand at all prices.
[2] infinite price elasticity of demand.
[3] unit price elasticity of demand at all prices.
[4] a price elasticity of demand that is different at all prices.

Figure 5

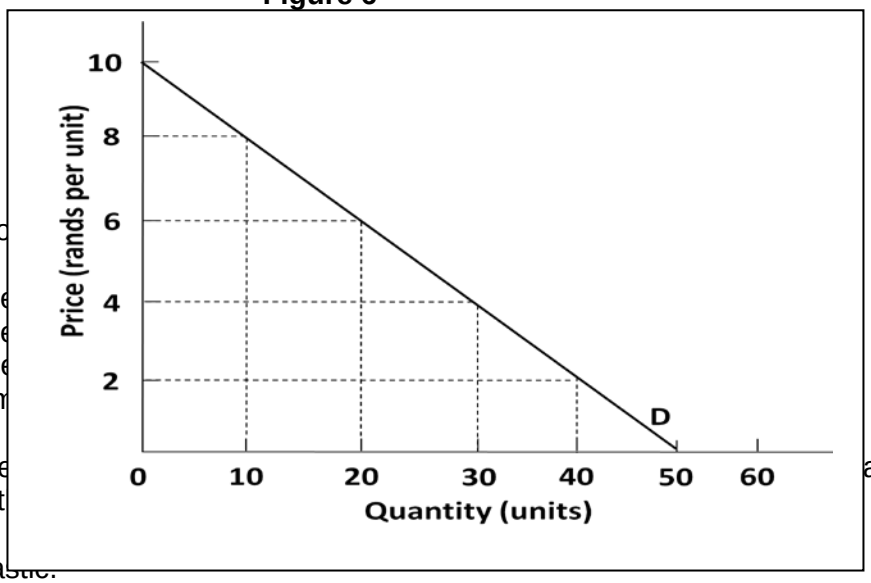


Use the figure below to answer questions 26 and 27.

26 Figure 6 illustrates a linear demand curve. By comparing the price elasticity in the R2 to R4 price range with the elasticity in the R8 to R10 range, you can conclude that the elasticity is

[1] greater in the R8 to R10 range.
[2] greater in the R2 to R4 range.
[3] the same in both price ranges.
[4] greater in the R8 to R10 range when the price rises, but greater in the R2 to R4 range when the price falls.

Figure 6



27 If the price falls fr

[1] total revenue
[2] total revenue
[3] total revenue
[4] quantity dem

28 If OPEC increase at the demand for oil in t

[1] perfectly elastic.
[2] unit elastic.
[3] elastic.
[4] inelastic

29 The cross elasticity of demand between Coke and Pepsi is

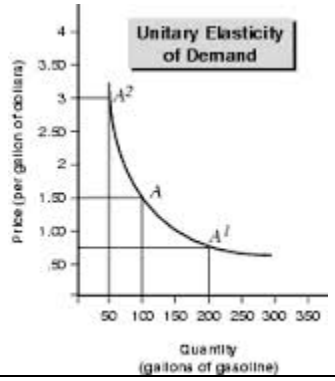
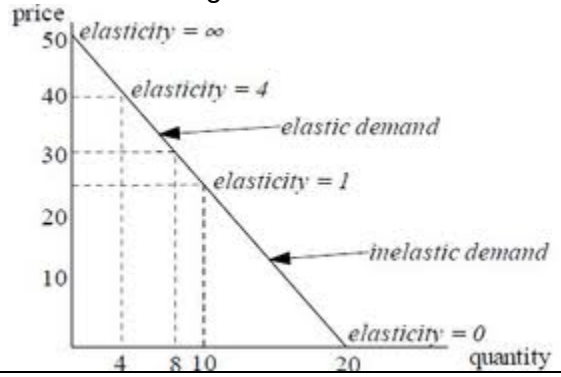
[1] positive; that is, Coke and Pepsi are complements.
[2] positive; that is, Coke and Pepsi are substitutes.
[3] negative; that is, Coke and Pepsi are complements.
[4] negative; that is, Coke and Pepsi are substitutes.

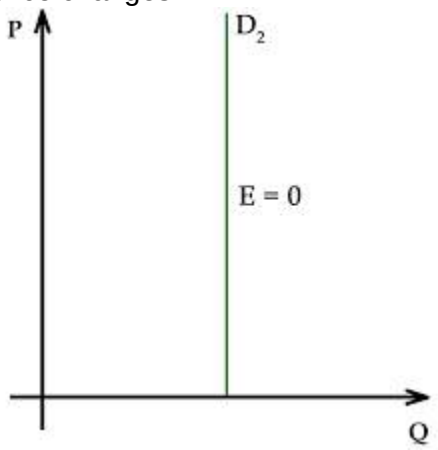
30 Mpho's monthly income has just risen from R3 800 to R4 200. As a result, she decides to increase the number of movies she watches each month by 5 percent. Her demand for movies is

[1] represented by a vertical line.

[2] represented by a horizontal line.
[3] income elastic.
[4] income inelastic.

Suggested solutions May/June 2011

23	Option 4	5*10=50 %
24	Option 3	10/x = 0.4 10/0.4 =x X=25
25	Option 3	Check the diagram for unitary elasticity in the textbook 
26	Option 1	Refer to the graph showing different elasticities along the demand schedule 
27	Option 3	At a price of R6 revenue is R6*20 = R120 At a price of R4 revenue is R4*30 = R120 Revenue is unchanged

28	Option 4	Demand will be inelastic/unresponsive to price changes 
29	Option 2	Refer to notes on Cross elasticity
30	Option 4	

November 2011

27. Which of the following options about linear demand curves is **true**?

    [1] The price elasticity of demand becomes larger in absolute value as price falls.
    [2] The price elasticity of demand becomes smaller in absolute value as price falls.
    [3] The price elasticity of demand is constant along the curve.
    [4] The price elasticity of demand and the slope of the demand curve are the same.

28. If the cross elasticity of demand between two goods is negative, then the two goods are

    [1] inferior goods.
    [2] substitutes goods.
    [3] complementary goods.
    [4] normal goods.

29. Luxuries are distinguished from necessities by the

    [1] number of substitutes.
    [2] fact that luxuries have high prices and necessities have low prices.
    [3] low price elasticity of demand for luxuries and high price elasticity of demand for necessities.
    [4] high income elasticity of demand for luxuries and low income elasticity of demand for necessities.

30. If the quantity demanded of beef increases by 5% when the price of chicken increases by 20%, the cross elasticity of demand between beef and chicken is

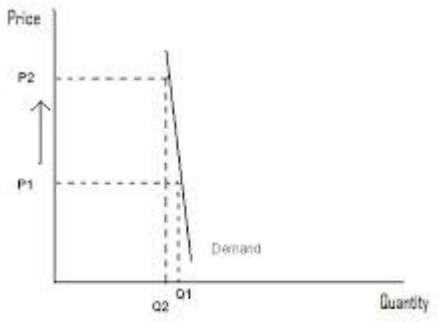
    [1] 2.5.
    [2] -4.
    [3] 4.
    [4] 0.25.

31. In which of the following instances is the demand said to be **perfectlyinelastic**?

    [1] An increase in price of 2% causes a decrease in quantity demanded of 2%.
    [2] A decrease in price of 2% causes an increase in quantity demanded of 0%.

[3] A decrease in price of 2% causes a decrease in total revenue of 0%.
[4] The demand curve is horizontal.

Suggested solutions November 2011

27	Option 4	Refer to notes on elasticity
28	Option 1	Revenue for a firm with an elastic demand curve always increases with price increases 
29	Option 2	Read on cross elasticity of demand (pizza and soft drink are consumed together)
30	Option 2	+ve Income elasticity- Normal Good -ve Income elasticity – Inferior Good
31	Option 3	Average Price/Average Quantity $_x$ $\Delta Q/\Delta P$

May/June 2012

Paper provided at the end of the booklet

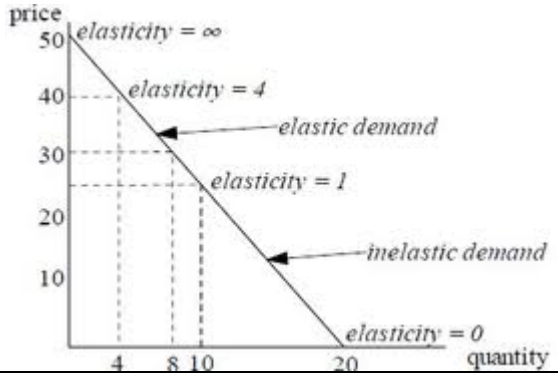
Suggested solutions May/June 2012

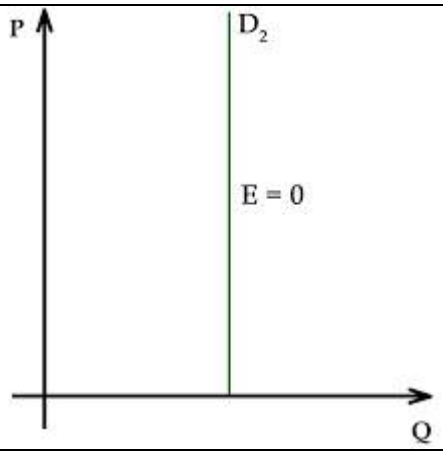
26	Option 1	Look up on the linear demand curve and the corresponding elasticities along the curve
27	Option 3	
28	Option 2	
29	Option 3	Take note of the positive sign of the Price elasticity here. This means Price and Quantity demanded move in the same direction, violating the law of demand. An example of such a good may be luxury goods like jewellery, fancy cars
30	Option 3	9/40 * 20/2 = 2.25
31	Option 4	0.5/7.5 * 5/3 = 2.33

November 2012

Paper provided at the end of the booklet

Suggested solutions November 2012

23	Option 3	
24	Option 4	Read on properties of Price elasticity of demand
25		
26	Option 3	
27	Option 2	Check on the graph above that shows different elasticities along a linear demand schedule 
28	Option 3	Read on cross elasticity
29	Option 1	
30	Option	Cross price elasticity: %Δ in beef quantity demanded/ %Δ in chicken price =5%/20% =0.25
31	Option 2	The situation represents a vertical demand curve, with no responses in quantity demanded per given price change

		 P D_2 E = 0 Q

Study Unit 7: The Theory of Consumer Choice

Utility

Utility is an economic term referring to the total satisfaction received from the consumption of a good or service. Though hard to measure, we can determine utility indirectly by studying consumer behaviour theories, which assume that a consumer will strive to maximize their utility. In this way, economists can measure utility in terms of economic choices that can be counted. Units of measuring utility are called **utils**. In its simplest forms, utility can be measured in people`s willingness to pay different amounts of money for different goods and services.

Utility is then a representation of individual preferences over a given set of goods and services. Preferences have a continuous utility representation, as long as they are transitive, complete and continuous.

The concept of Utility is used to construct an **indifference curve** which plots different combinations of goods and services which can give the same amount of utility to an individual/society.

Cardinal Utility

When cardinal utility is used, the magnitude of utility differences is treated as an ethically or behaviourally significant quantity taking numerical values (like 1, 2, 3 etc.). These values are comparable and based on a benchmark scale like speed, length, height, weight.

Ordinal utility

Ordinal utility captures only ranking and not strength of preference.

Past Exam Practice

May/June 2011

No relevant questions in this paper

November 2011

Paper provided at the end of the booklet

November 2011 Suggested answers

33	Option 4	
34	Option 3	
35	Option 1	
36	Option 4	
37	Option 3	

November 2012

32. An indifference curve is a line that shows

    [1] what the consumer can afford to buy.
    [2] how the quantity demanded of a good changes as its price changes.
    [3] combinations of goods among which the consumer derives the same level of satisfaction.
    [4] combinations of goods that have the same marginal rate of substitution.

33. The rate at which a consumer will give up one product for another product is referred to as

    [1] diminishing returns.
    [2] diminishing opportunity cost.
    [3] the marginal rate of substitution.
    [4] the budget line.

34. At the point where the budget line is just touching an indifference curve,

    [1] the slope of the budget line is equal to the slope of the indifference curve.
    [2] the marginal rate of substitution equals the relative price.
    [3] it is not desirable because the consumer can move to a higher indifference curve.
    [4] Both answers [1] and [2] are correct.

35. Roger earns R600 per month, which he spends on DVDs and CDs. The price of a DVD is R60, and the price of a CD is R120. Which of the following combinations of DVDs and CDs is most likely to be his best affordable combination?

    [1] 8 DVDs and 1 CD
    [2] 5 DVDs and 2 CDs
    [3] 3 DVDs and 4 CDs
    [4] 2 DVDs and 5 CDs

36. A budget line is a straight line designed to show

[1] how income is related to hours worked.
[2] all combinations of two goods that can be purchased with a given level of income.
[3] the way a homemaker should divide money among several commodities.
[4] that if more money is spent on one good, the breadwinner must work all the harder to maintain a satisfactory level of living.

37. If the prices of both goods increase by 10 percent, the budget line

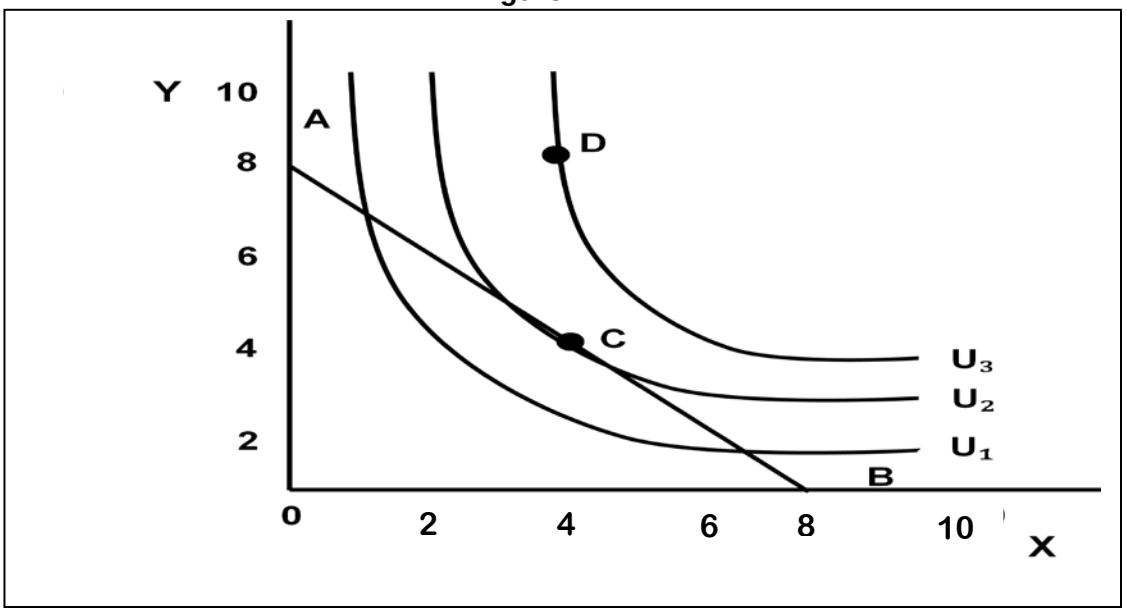
[1] shifts parallel to the right.
[2] shifts parallel to the left.
[3] is unaffected since only relative price changes matter.
[4] pivots on the axis of the more expensive good.

Question 38 and 39 is based on figure 7 below.

38. In figure 7, point D for the consumer

[1] will be chosen because total utility is larger than at point C.
[2] would not be chosen because it is less desirable than point C.
[3] is unattainable, given the consumer's budget.
[4] hasa total utility equal to point C.

Figure 7



39. In figure 7 above, the consumer's marginal rate of substitution at his optimum choice of Xand Y is

[1] –1.
[2] 16.
[3] 8.
[4] –8.

November 2012 Suggested solutions

32	Option3	
33	Option3	
34	Option 4	
35	Option 1	600 = P(dvd) * Dvd P(Cd) * Cd 600 = 60Dvd + 120 Cd
36	Option 2	
37	Option 2	Both goods become less affordable equally to the consumer
38	Option 3	
39	Option 1	

May/June 2013

Paper provided at the end of the booklet

Suggested solutions May/June 2013

32	Option 3	
33	Option 3	
34	Option 1	
35	Option 3	
36	Option 2	
37	Option 4	
38	Option 3	

Study Unit 8: Background to Supply, the theory of Production and Cost

The primary objective of any firm/business is to make a profit, which is the difference between a firm`s revenue and costs. The relationship between revenue and costs is then critical in determining the optimum output level that will maximize the gap between the cost side and the revenue side.

Explicit costs

Explicit/accounting costs are those payments made to the factors of production. They include rent, wages, telephone, water, electricity, raw materials, fees etc.

Implicit costs

These include the **opportunity costs**of production of employing the firm`s resources in production.

Factors of Production

The primary factors of production are **land and labor**. Other factors of production are Capital (tools, machinery, and equipment) and Entrepreneurship

Costs of Production

These are the costs incurred by any business in the process of converting the factors of production to produce goods and services for consumption by households. In Economics we distinguish between **Fixed Costs** (**FC**) (those costs that do not vary with the level of production e.g Insurance, Rent, interest on borrowed funds, advertising) and **Variable Costs (VC)** (the costs that change as output/production changes e.g. electricity, telephone, water, energy)

Fixed and Variable costs make up **Total Costs (TC).**

Production in the short run and long run

In the **short run**, at least one of the factors of production remains unchanged (fixed). Given a firm employing two factors of production (Capital & Labour), at least one of them remains fixed while the other may vary.

In the l**ong run,** both factors of production can be varied.

Output Measures

Total Product (TP) - the total amount of out produced by a firm over a given period of time

Average Product (AP) - the output per variable input: **TP/Number of variable input units**

Marginal Product(MP)– measures the change in **Total Product**resulting from employing additional units of the variable input: ΔTP/ΔInput (Labor/Capital)

Labor Input	**Capital Input**	**Total Product (TP)**	**Variable Cost (VC)**	**Fixed Cost (FC)**	**Total Cost (TC)**	**Marginal Product of Labour (MPL)**	
0	1	0	0	100	100		
1	1	5	20	100	120	5	
2	1	15	40	100	140	10	
3	1	23	60	100	160	8	
4	1	27	80	100	180	4	
5	1	29	100	100	200	2	
6	1	30	120	100	220	1	

Past Exam practice questions

May/June 2011

32 Which of the following statement/s is/are **correct**?

In any production process, the marginal product of labour is the

(a) total output divided by total labour inputs.
(b) total output minus the total capital stock.
(c) change in total output resulting from a small change in the labour input.
(d) total output produced by labour inputs.

[1] Only a and b
[2] Only b and c
[3] Only c
[4] Only b

33 Which of the followings statement/s is/are **correct**?

In the presence of diminishing returns, holding at least one factor of production constant,

(a) the marginal product of a factor is positive and rising.
(b) the marginal product of a factor is positive but falling.
(c) the marginal product of a factor is falling and negative.
(d) the marginal product of a factor is constant.

[1] Only b and c
[2] Only a and d
[3] Only b
[4] Only d

34 Mpho produces 100 bottles of orange juice with an average total cost of 50 cents per glass and an average variable cost of 40 cents per glass. What is her total fixed cost?

[1] R40
[2] R0,10
[3] R10
[4] R12

35 Which **one** of the following will shift a firm's average variable cost upwards?

(a) An increase in the productivity of labour.
(b) A decrease in the productivity of labour.
(c) An increase in fixed costs.
(d) A decrease in the demand for the goods the firm produces.

[1] Only a
[2] Only b
[3] Only c
[4] Only d

Table 2 below illustrates the total cost of production of umbrellas at Weather Protection Ltd. **Use the table to answer questions 36 and 37.**

Table 2

Umbrellas	Total costs
0	R10
1	R15
2	R24
3	R39
4	R60
5	R85

36 The total fixed cost of producing an umbrella is

[1] R3.
[2] R5.
[3] R10.
[4] R15.

37 The marginal cost of producing the 4^{th} umbrella is

[1] R60.
[2] R21.
[3] R15.
[4] R5.

Complete Table 3 below and use the information to answer questions 38 and 39.

Table 3

Output	Total cost	Fixed cost	Variable cost	Marginal cost	Average cost	Average fixed cost
0	30		0			
1			10			
2			18			
3			22			
4	56					
5	64					6
6	76					
7				15		
8					15	

38 What is the marginal cost of producing the 8th unit of the good?

[1] 4
[2] 10
[3] 12
[4] 29

39 What is the average cost of producing the 2nd unit of output?

[1] 5
[2] 24
[3] 4
[4] 2

40 The difference between average total cost and average variable cost

(a) is constant.
(b) is the total fixed cost.
(c) gets smaller as output decreases.
(d) is the average fixed cost.

[1] Only b and c
[2] Only c and d
[3] Only d
[4] Only a

41 A firm producing 7 units of output has an average total cost of R15 and has to pay R35 for its fixed factors of production, irrespective of whether it produces or not. Given this information, how much of the average total cost is made up of variable costs?

[1] R20
[2] R10
[3] R30
[4] R5

Suggested Solutions May/June 2011

32	Option 3	
33	Option 3	
34	Option 3	ATC= AFC+AVC 50 =AFC+40 AFC=10 Since total fixed costs do not change with the level of output, they stay the same at a level of 10
35	Option 2	This will increase the firm`s cost of producing each unit of output
36	Option 3	Given by the level of total costs when there is no production
37	Option 2	Marginal cost is the incremental cost of producing one more unit of output =R60-R39 =R21
38	Option 4	Complete the table on Question 38, Page 84
39	Option 2	Refer to the completed table
40	Option 3	
41	Option 2	TP = 7 ATC = 15 FC = 35 ATC =AFC + AVC 15 = 5+ AVC AVC = 10

November 2011

Paper provided at the end of the booklet

November 2011 Suggested solutions

38	Option 2	AR = TR/Q
39	Option 1	
40	Option 1	
41	Option 2	
42	Option 2	TC = AC *Q Q = OG AC= GE
43	Option 3	First note that the AFC = AC-AVC (vertical distance between AC and AVC) which is EF AFC =TFC/Q TFC = AFC* Q

May/June 2012

Paper and solutions provided at the end of the booklet

November 2012

40. The main difference between the short run and long run is that

    [1] all factors of production are variable in the short run but at least one factor of production is fixed in the long run.
    [2] in the short run we have some factors of production fixed whilst in the long run all factors of production are variable.
    [3] in the short run, capital is the variable factor of production whilst labour is mostly fixed.
    [4] total costs are equal to total variable cost in the short run.

41. Thomas started his vegetable business with an amount of R10 000. At the end of the 1st month, his total revenue was equal to R15 000. If he had invested his R10 000 with a financial institution, Thomas could have earned R3 000. What is Thomas's economic profit or loss?

    [1] Economic profit of R5 000.
    [2] Economic profit of R3 000.
    [3] Economic loss of R2 000.
    [4] Economic profit of R2 000.

42. Which of the following statements is/ are **correct**

    a At the maximum point of the total product curve, average product is equal to zero.
    b Total product start by increasing at an increasing rate and then increase at a decreasing rate as the amount of the variable factor is changed in the short run.
    c When marginal product is at its maximum point, marginal cost is at its minimum value.

    [1] Only b and c.
    [2] Only b.
    [3] Only a and c.
    [4] All the statements are correct

Table 1 below shows the number of shirts produced by a firm in the short run using three machines and labour. Use this table to answer Question 43 and Question 44.

Table 1

Capital	Labour	Total Product	Marginal Product	Average Product
3	0			
3	1	10		
3	2		15	
3	3			16
3	4			10

43. What is the maximum value of total product for this firm?

[1] 48
[2] 25
[3] 10
[4] 40

44. What is the level of marginal product associated with 3 units of labour?

[1] 23
[2] 15
[3] 10
[4] 16

Use table 2 below to answer Questions 45 to 47. The table shows how short run costs change as output changes.

Table 2

Quantity	MC	AC	AVC	AFC
1		30		
2		25	15	
3		20		
4		25	20	

45. What is the value of total fixed costs?

[1] 30
[2] 20
[3] 60
[4] 100

46. What is the value of average fixed cost of producing 4 units?

[1] 5
[2] 15
[3] 10
[4] 13.33

47. What is the value of marginal cost of producing the 3rd unit?

[1] 10
[2] 40
[3] 20
[4] 0

November 2012 Suggested solutions

40	Option 2	
41	Option 4	Economic profit includes accounting profit (Revenue-Costs) and Opportunity cost = R15 000-R10 000-R3 000 =R2 000
42	Option 1	
43	Option 1	Complete the table
44	Option 1	Read the completed table
45	Option 4	TFC = AC*Q = 25*4 = 100
46	Option 1	AFC = FC/Q = 20/4 = 5
47	Option 1	TC of producing 2nd Unit =25*2 = 50 TC of producing 3rd unit =20*3 = 60 MC is therefore 60-50 =10

Perfect Competition

The following are characteristics of a perfectly competitive market:

Price taking

Both the Consumer (buyer) and the Producer (seller) are seen as price takers, i.e. they have no influence on the market price of a good or service. This is because there is a **large number of buyers and sellers** to influence the price.

Homogenous goods and services

All the producers sell homogenous/standardized goods and services, at least in the eyes of the consumers. Examples include farm produce.

Free Entry and Exit

New producers can easily enter the industry, and existing ones can easily exit. There are no barriers to entry/exit

The Firm`s Profit

- Profit = Total Revenue – Total Cost **TR- TC**……..**(1)**

Where TR = Price* Quantity : P*Q **P*Q** ……**(2)**

The Text considers a wheat farmer who can sell his Wheat at R18 per kg:

Output (Q)	Total Revenue (TR)	Total Cost (TC)	Profit (TR-TC)
0	0	14	-14
1	18	30	12
2	36	36	0
3	54	44	10
4	72	56	16
5	90	72	18
6	108	92	16
7	126	116	10

Profit Maximising Condition

The optimum amount of an activity is the level at which Marginal benefit = Marginal cost
MB=MC

The Marginal Benefit to the firm is the Marginal Revenue (**MR**) which is given by the change in Total Revenue **(TR**) generated by one additional unit of Output (**Q**) :

MR = ΔTR/ΔQ……(**3)**

The Marginal Cost (**MC**) is given by the change in Total Cost (**TC**) brought about by producing an extra unit of Output **(Q) :**

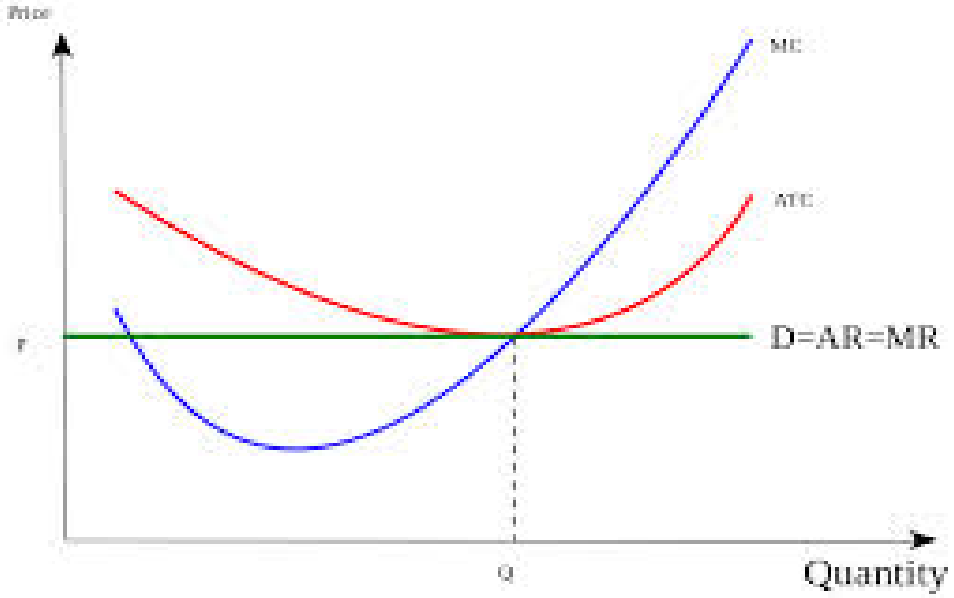
MC = ΔTC/ΔQ……**(4)**

Thus for the **profit maximizing firm**, it must produce additional output units for as long as **MR≥MC**

The following examples continues from the previous wheat farmer:

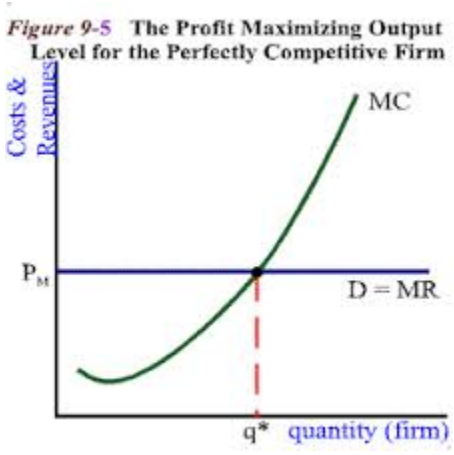
Output (Q)	**Total Revenue (TR)**	**Total Cost (TC)**	**Profit (TR-TC)**	**Marginal Revenue (MR)**	**Marginal Cost (MC)**	**Net gain MR-MC**
0	0	14	-14			
1	18	30	-12	18	16	2
2	36	36	0	18	6	12
3	54	44	10	18	8	10
4	72	56	16	18	12	6
5	90	72	18	18	16	2
6	108	92	16	18	20	-2
7	126	116	10	18	24	-6

Graphical Representation



Notes

- Notice the point of intersection of the MC and MR curves. The firm should continue production as long as **MC≥MR**
- Since the Firm is a Price taker, **MR=P=AR=D**
- Optimal output occurs where **P=MC**



To produce or not to produce

The mere fact that the firm is unprofitable does not mean the firm should close/shut down. This is because the firm might incur more losses in shutting down than it would if it stays in business. If the firm shuts down, it might, in **the short run**, avoid its variable costs (cost that vary/change with the level of production)

But what about the Fixed Costs? Those costs that do not depend with the level of production/output. So the firm should only consider if, by producing, it can cover its **Total Variable Costs** (TVC) and ignore its **Fixed Costs**.

The Shut Down Rule

The shutdown decision depends on how **Total Revenue (TR**) compares to **Total Variable Cost (TVC)** at the optimum output level.

The firm should:

- continue production if **TR>TVC,**
- be indifferent if **TR=TVC**
- shutdown if **TR<TVC**

Critical shutdown price occurs where **MC=P=AVC**

Past Exam practice questions

May/June 2011

42 In perfect competition, in the long run, some firms will exit the market if the price of the good offered for sale is less than

[1] the marginal revenue.
[2] the marginal cost.
[3] the average total costs.
[4] the average revenue.

43 All of the following are correct characteristics of a perfectly competitive market **except**

(a) that there are many buyers and sellers in the market.
(b) the goods being sold are mostly the same.
(c) that firms generate small but positive economic profits in the long run.
(d) that firms can freely enter or exit the market.

[1] Only a and d
[2] Only b and c
[3] Only b
[4] Only c

44 A perfectly competitive firm maximises profits when it produces its output up to the point where

[1] price equals average variable cost.
[2] marginal revenue equals average revenue.

[3] marginal cost equals total revenue.
[4] marginal cost equals marginal revenue.

45 Which of the following statement/s is/are **correct**?

In the long run equilibrium in a perfectly competitive market, firms are operating at

(a) the minimum of their average variable curve.
(b) zero economic profit.
(c) the intersection of the marginal cost and average total cost curves.
(d) supernormal profits.

[1] All the statements are correct
[2] Only a and d
[3] Only c
[4] Only b

46 Which of the following statements regarding a perfectly competitive firm are **correct**?

(a) Along the rising part of the marginal cost curve, the firm maximises its profits when marginal cost equals marginal revenue.
(b) As long as marginal revenue exceeds marginal costs, the firm should increase its output to increase its profits.
(c) As long as the marginal cost exceeds the marginal revenue, the firm should reduce its output to maximise its profits.
(d) If profits are defined in terms of per unit costs, then a perfectly competitive firm maximises profit at the point where marginal revenue equals marginal costs.

[1] Only a and b
[2] Only c and d
[3] Only b and d
[4] All the above statements are correct

47 If today, firms in a perfectly competitive industry are making an economic profit, then we know that in the long run, firms will_____ the industry until all firms in that industry are _____

[1] enter, making zero economic profits.
[2] exit, producing at the minimum part of their long run average cost curve.
[3] exit, covering only their total fixed cost.
[4] enter, making economic losses.

48 Sarah's business produces kids' toys. The market price of the toys is R10 each and Sarah produces 100 toys. The marginal cost of producing each toy is R11. Given this information

[1] Sarah will maximise her profit by producing fewer than 100 toys.
[2] Sarah will maximise her profit if she reduces the price of each toy to R9.
[3] Sarah is maximising her profits.
[4] Sarah will maximise her profits by producing more than 100 toys.

49 Which of the following statement/s is/are **correct**?

In a perfectly competitive market, each firm
(a) produces as much as it can.
(b) is a price taker.
(c) faces a perfectly inelastic demand for its product.
(d) can influence the price of its product.

[1] All of the above statements are correct
[2] Only b
[3] Only a and c
[4] Only c

50 For a perfectly competitive firm, at short term equilibrium its marginal revenue

[1] is less than the market price.
[2] exceeds the price it charges for its goods.
[3] equals its normal profit.
[4] equals the market price.

Suggested solutions May/June 2011

42	Option 3	
43	Option 4	In the long run, all firms earn normal profits
44	Option 4	Profit maximising condition **MC=MR**
45	Option 4	
46	Option 4	
47	Option 1	
48	Option 1	
49	Option 2	
50	Option 4	P=MR=Demand Curve
51	Option 3	

November 2011

Paper provided at the end of the booklet

Suggested solutions November 2011

44	Option 3	Look on characteristics of perfect competition
45	Option 3	MC=MR
46	Option 2	
47	Option 4	AFC = TFC/Q = 100/4 = 25
48	Option 3	MC of producing 4th unit is R180 Profit maximizing position is given by MC=MR Therefore out will be 4units
49	Option 3	
50	Option 4	AFC = ATC – AVC = 35 – 28 = 7
51	Option 4	
52	Option 3	
53	Option 1	

May/June 2012

Paper provided at the end of the booklet

Suggested solutions May/June 2012

44	Option 3	
45	Option 2	
46	Option 3	At an output level of zero, TVC = 0
47	Option 1	In Perfect competition MR=AR=Demand
48	Option 3	Because of our assumption of freedom of entry and exit, any economic profits will attract entrance of new firms, and this will erode those realised abnormal profits
49	Option 4	
50	Option 2	
51	Option 2	Firm already at profit maximising output since **MC=MR**

52	Option 1	Profit per unit = Price per unit – Cost per unit =P – ATC =8 – 6 =2
53	Option 4	

November 2012

48. Which of the following requirements is **not**a characteristic of perfect competition?

[1] There is no government intervention.
[2] Firms or sellers are quantity adjusters whilst buyers are price takers.
[3] Sellers have freedom to enter and leave the market.
[4] Information is perfect and factors of production are mobile.

49. Which of the following profit maximizing conditions are **correct** for a perfectly competitive firm in the long run?

[1] P = MC =AR
[2] AR =AC =MC
[3] MC = AVC =AC
[4] MR = AVC =AR

Table 3 below shows how revenue and costs change as the perfectly competitive firm varies its output. Use the table to answer Question 50 and 52.

Table 3

Q	TR	AR	TC	MC
2	12	6	8	
3			12	

4			17	
5				6
6			30	

50. At what level of output is this firm maximizing profit in a perfectly competitive market?

    [1] 4
    [2] 5
    [3] 6
    [4] 3

51. What is the price the firm is charging per unit?

    [1] R6
    [2] R4
    [3] R10
    [4] R12

52. How large is the profit made by this firm at the profit maximizing output level?

    [1] R7
    [2] R6
    [3] R5
    [4] R4

53. If a perfectly competitive firm is making economic losses in the short run, what should happen for long run equilibrium to be attained?

    [1] Firms making losses will exit, supply falls and price increases.
    [2] More outside firms will move in, supply increases resulting in price falling and hence normal profits being earned.
    [3] Nothing will happen; firms will continue making losses even in the long run.
    [4] As long as the firm is able to cover its variable costs, short run equilibrium will be the same as long run equilibrium.

54. If a firm in a perfectly competitive market sets the price lower than the market price, then

[1] sales will drop to zero (0) and nothing will be sold.
[2] sales will remain unchanged.
[3] sales will decrease only slightly because of the shape or slope of the market demand curve.
[4] all the other firms will do the same.

55. Which of the following criteria is the same for **both** the perfect competitor and the monopolist?

[1] Information about market conditions.
[2] The possibility of earning economic profit in the long run.
[3] The number of firms in the industry.
[4] The nature of the product.

Suggested solutions November 2012 provided at the back

Imperfect Competition and the Labour Market

Imperfect competition is a market where some rules of Perfect Competition are not followed. Virtually all real world markets follow this model.

In imperfect competition, the Price of the good can rise above its **Marginal Cost (MC), P>MC**

Thus have consumers will decrease their level of purchase and there will be inefficient levels of production.

Most common forms of imperfect markets include **monopolies (**one dominant seller**), oligopolies (**few sellers**), duopolies, monopsonies and monopolistic competition (**many sellers producing highly differentiated products).

The Labor Market

The market for labour is just like the market of any other good or service, determined by the interaction of demand and supply for labor, with the equilibrium price equal to the **wage rate.** Individuals supply their labour in return for a wage, with firms demanding the labour to produce goods and services and pay a wage to the workers in the form of compensation.

Marginal Revenue Product for Labour

This is the increase in revenue a firm gets by employing one additional worker/ unit of labor.

Consider a Perfectly Competitive firm that uses labour as a production input and facing a R10 maket price for its product (output)

Labour input (L)	Total Product (TP)	Marginal Product of Labour (MPL)	Marginal Revenue Product of Labour (MRPL)
0	0		
1	9	9	90
2	17	8	80
3	22	5	50
4	25	3	30
5	26	1	10

Effects of a minimum wage in the labor market

Effects of a minimum wage in the labour markets are the same as those of a price floor under the market demand for goods and services. Government usually intervene in the labour market by imposing minimum wages. This creates a situation whereby a good number of workers will lose their jobs (the few losers) and those who manage to remain employed will enjoy the benefits of a higher wage.

Past Exam Practice

May/June 2011

56 In a monopoly, economic profit is possible in the long run because

[1] the product sold is homogeneous.
[2] there is no government intervention.
[3] demand for the product is perfectly elastic.
[4] there are barriers to entry.

57 Interdependence between the firms is a distinctive feature in

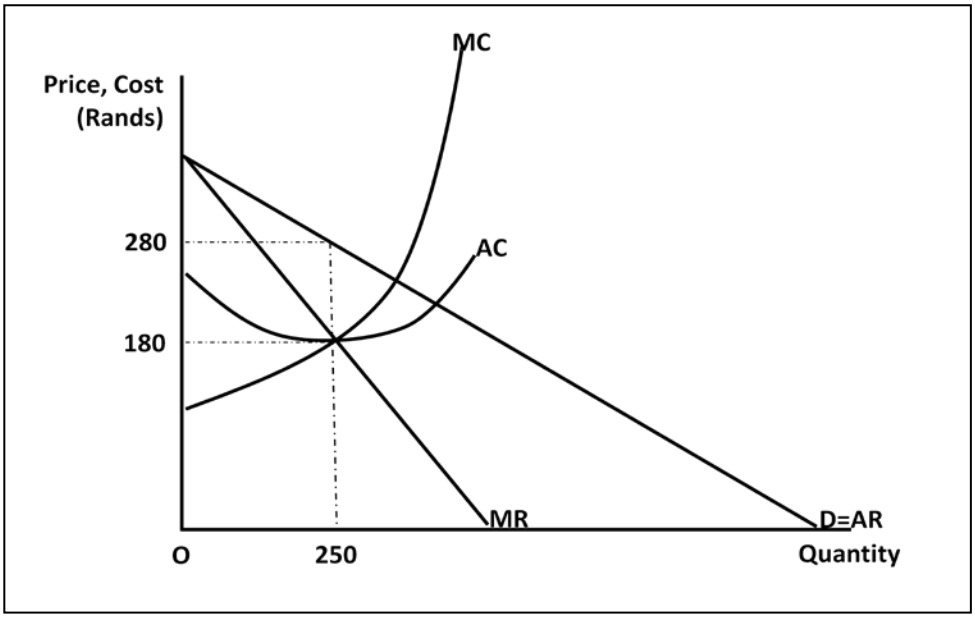
[1] oligopoly.
[2] monopolistic competition.
[3] perfect competition.
[4] monopoly.

58 Firms operating under monopoly set their equilibrium price

[1] below the average revenue.
[2] equal to the marginal revenue.
[3] above the marginal revenue.
[4] equal to the marginal cost.

Figure 9 below relates to the short-run monopoly equilibrium. **Use the figure to answer questions 59, 60 and 61**.

Figure 9



59 The total profit of the monopoly is equal to

[1] R28 000.
[2] R46 000.
[3] R18 000.
[4] R25 000.

60 The monopolist profit per unit is equal to

[1] R100.
[2] R250.
[3] R280.
[4] R460.

61 The total cost of the monopolist is equal to

[1] R28 000.
[2] R45 000.
[3] R18 000.
[4] R25 000.

62 Which **one** of the following is **NOT** aform of barrier to entry in oligopoly?

[1] Advertising
[2] Product differentiation
[3] Brand proliferation
[4] Price competition

63 Which **one** of the features below is unique to the labour market?

[1] Non-monetary factors are not important in the labour market.
[2] In the labour market, labour is traded on a daily basis at the best wage.
[3] Labour cannot be classified or standardised.
[4] Labour services are transferrable to other people.

64 The real wage is defined as

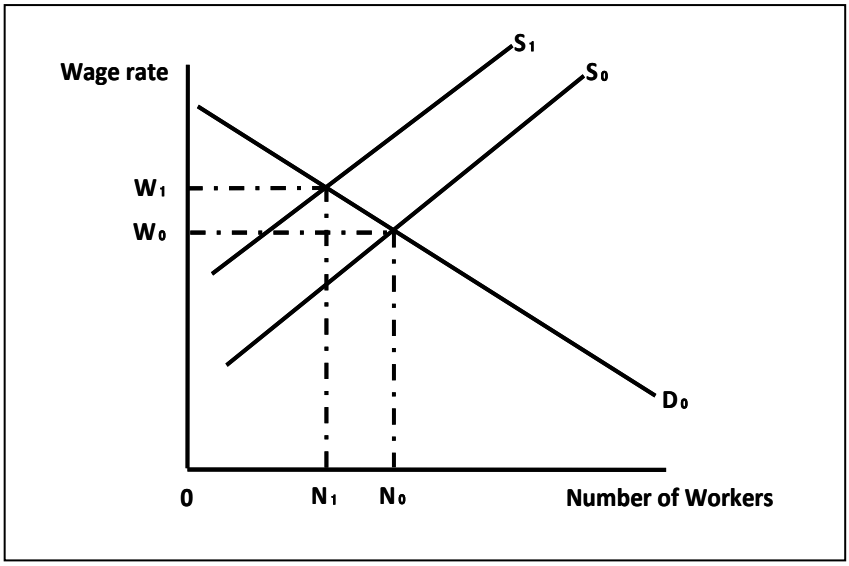
[1] the amount of money that is to be paid to a worker at a specific point in time.
[2] the quantity of goods and services that can be purchased with the money wage.
[3] the amount of money actually earned during a specific period, including bonuses.
[4] the actual amount of money received by a worker per hour, day, week, month or year.

65 Suppose that the nominal wage increases by 4 percent while the price of goods and services increases by 7 percent. The real wage will

[1] increase by 11 percent.
[2] decrease by 7 percent.
[3] increase by 4 percent.
[4] decrease by 3 percent.

The figure below relates to the changes in labour market equilibrium. **Use the figure below to answer question 66.**

Figure 10



66 A shift of the labour supply curve from S_0 to S_1 could be due to

[1] an increase in wages in other occupations.
[2] a decrease in the price of a product for the market in question.
[3] an increase in the price of a substitute factor of production.
[4] a decrease in the number of firms supplying a product.

67 A decrease in the price of a complementary factor of production will result in

[1] a leftward shift of the labour supply curve.
[2] a rightward shift of the labour demand curve.
[3] a leftward shift of the labour demand curve.
[4] a rightward shift of the labour supply curve.

Table 4 below relates to profit maximisation in the labour market. **Complete the table and answer question 68.**

Table 4

Number of workers	Total physical product	Marginal physical product	Price per unit	Marginal revenue product
0	0		20	
1	15		20	
2	23		20	
3	29		20	
4	34		20	
5	36		20	

68 If the wage rate is R160, it would be profitable for the firm to employ…… worker(s).

[1] 5
[2] 1
[3] 4
[4] 2

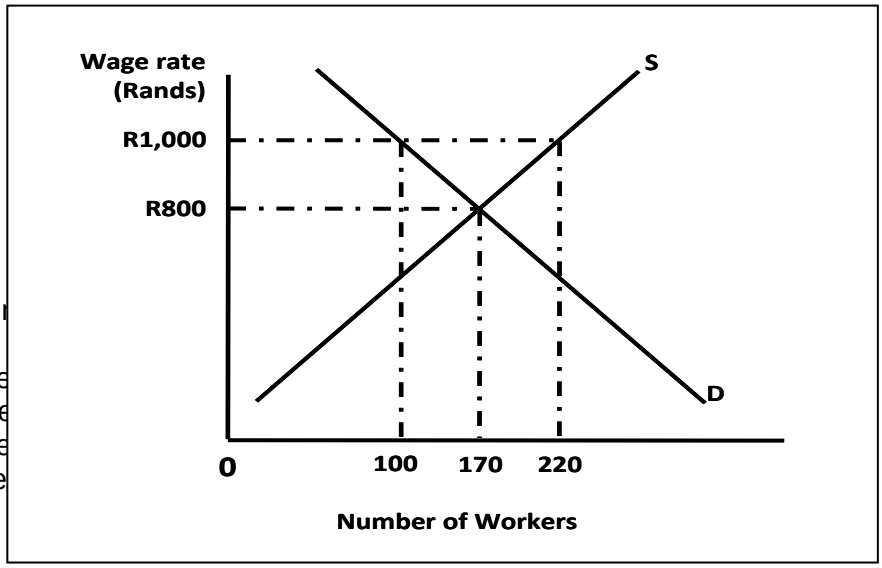
69 Trade unions can attempt to raise the wage rate by

[1] encouraging an increase in labour supply.
[2] assisting the firms to increase the supply of the product.
[3] increasing the demand for the product of the industry.

[4] enforcing a wage rate that is equal to the equilibrium wage rate.

Figure 11 below illustrates the imposition of a minimum wage in a perfectly competitive labour market. **Use the figure to answer question 70.**

Figure 11



70 If the minimu

[1] an exce
[2] an incre
[3] an exce
[4] a decre

Suggested solutions May/June 2011

56	Option 4	Check monopoly characteristics
57	Option 1	
58	Option 3	
59	Option 4	Profit = Q [P- AC] = 250 [280-180] = 25 000
60	Option 1	Profit per unit = P – AC = 280-180 = 100
61	Option 2	TC = Q*AC = 250*180 = 45 000
62	Option 4	
63	Option 3	
64	Option 2	Real Wage = Nominal Wage/Price

65	Option 4	Change in real Wage =Change in Nominal- Change in Prices =4 – 7 = -3 (a decrease of 3%)
66	Option 1	If the wage rate in other occupations increase, this attract the workers to flock to that industry (assuming perfect mobility of labour). This will decrease the supply of labour
67	Option 2	
68	Option 4	MR for the 2nd worker is 160 Profit is maximizes where **MR=MC** (in this case the wage rate)
69	Option 3	
70	Option 3	

November 2011

Paper and solutions provided at the end of the booklet

May/June 2012

Paper and solutions provided at the end of the booklet

November 2012

63. Which **one** of the features below is unique to the labour market?

[1] Labour is intrinsically homogeneous.
[2] The labour market is often described as a segmented market.
[3] The remuneration consists only of wages.
[4] Labour is usually employed by means of a short-term contract.

Complete the following table and answer questions 64 and 65. Table 4 shows the production of sandals per week by Ti Lin Footwear in a perfectly competitive market. The sandals sell at a R100 a pair.

Table 4

Number of workers	Total physical product	Marginal physical product	Product price (Rand)	Marginal revenue product

0	0	0		
1	13	13		
2	23	10		
3	32	9		
4	40	8		
5	47	7		

64. Which **one** of the following regarding table 4 is **correct**?

[1] The total physical product shows the additional production from each additional unit of labour employed.
[2] The product price remains the same because under perfect competition the market price is determined by the interaction between market demand and market supply.
[3] The marginal revenue product shows the value of the average production for each level of employment.
[4] It is possible to determine the profit maximizing level of employment from this table.

65. At a wage rate of R800 a week Mr.Lin

[1] will let the trade union decide on the level of employment.
[2] decides that the wage rate is not important and employ all the workers as long as their marginal revenue product is positive.
[3] will employ 5 workers.
[4] will employ 4 workers.

66. To achieve maximum profit the firm will

[1] cut back on employment as long $MP_L = MC_L$.
[2] under perfect competition employ labour until MRP = Wage rate.
[3] cut back on employment as long as the marginal revenue product is higher than the marginal cost of labour.
[4] increase employment as long as the marginal revenue product is less than the marginal cost of labour.

67. The market demand for labour

[1] is the horizontal summation of all the individual demand curves.
[2] will shift to the left when the wage rate decreases.
[3] will decrease if the number of firms in the industry increases.
[4] will not change if the productivity changes, only the wage rate will change.

68. Which of the following is **NOT** a reason why labour markets are imperfect?

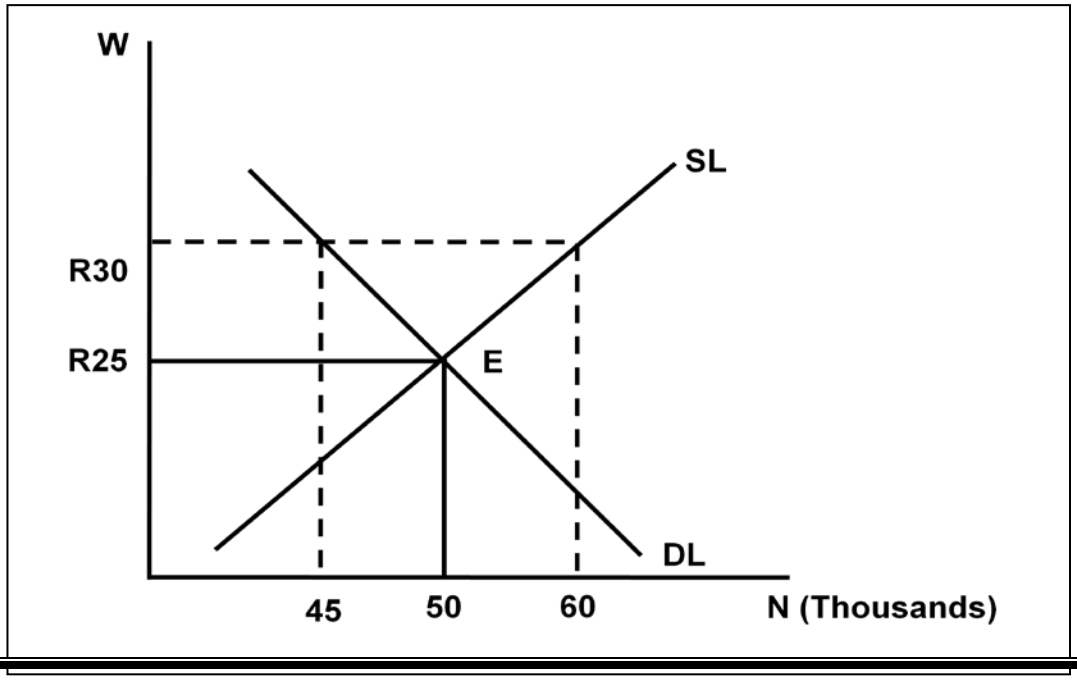
[1] Every worker brings a different skill to the market place.
[2] There is no government intervention in the labour market.
[3] In real life employers and employees have limited knowledge about market conditions.
[4] The labour market is segmented which limits the mobility of labour between occupations.

69. Trade unions can simultaneously raise the wage rate and the level of employment by

[1] restricting or decrease the supply of labour.
[2] increasing productivity to shift the labour supply curve to the left.
[3] by forcing the employer to accept a wage higher than the equilibrium wage.
[4] increasing the demand for the product of the industry.

Figure 9 below explains the introduction of a minimum wage of R30 per hour in the market for bus drivers. Study the graph and answer question 70

Figure 9



70. With the introduction of a minimum wage of R30,

[1] the market wage being the effective wage will be lower than the market wage.
[2] there will be an excess supply of 10 000 bus drivers.
[3] only 45 000 bus drivers to be employed.
[4] only5 000 bus drivers will lose their jobs.

October/November 2011 Solutions

1. 2 11. 4 21. 4 31. 3 41. 2 51. 4 61. 1

2. 1 12. 1 22. 1 32. 4 42. 2 52. 3 62. 4

3. 2 13. 2 23. 3 33. 4 43. 3 53. 1 63. 1

4. 4 14. 3 24. 2 34. 3 44. 3 54. 3 64. 3

5. 4 15. 4 25. 1 35. 1 45. 3 55. 1 65. 3

6. 3 16. 2 26. 2 36. 4 46. 2 56. 3 66. 1

7. 4 17. 2 27. 4 37. 3 47. 4 57. 3 67. 4

8. 2 18. 2 28. 1 38. 2 48. 3 58. 3 68. 2

9. 1 19. 1 29. 2 39. 1 49. 3 59. 2 69. 3

10. 1 20. 1 30. 2 40. 1 50. 4 60. 3 70. 2

May/June 2011 Solutions

1. 3	11. 1	21. 3	31. 2	41. 2	51. 3	61. 2
2. 3	12. 3	22. 2	32. 3	42. 3	52. 2	62. 4
3. 2	13. 2	23. 4	33. 3	43. 4	53. 1	63. 3
4. 3	14. 3	24. 3	34. 3	44. 4	54. 2	64. 2
5. 2	15. 2	25. 3	35. 2	45. 4	55. 3	65. 4
6. 4	16. 4	26. 1	36. 3	46. 4	56. 4	66. 1
7. 3	17. 1	27. 3	37. 2	47. 1	57. 1	67. 2
8. 2	18. 3	28. 4	38. 4	48. 1	58. 3	68. 4
9. 1	19. 3	29. 2	39. 2	49. 2	59. 4	69. 3
10. 2	20. 2	30. 4	40. 3	50. 4	60. 1	70. 3

October/November 2012 Solutions

1. 4	11. 1	21. 2	31. 2	41. 4	51. 1	61. 4
2. 2	12. 2	22. 4	32. 3	42. 1	52. 1	62. 2
3. 3	13. 3	23. 3	33. 3	43. 1	53. 1	63. 2
4. 2	14. 3	24. 4	34. 4	44. 1	54. 1	64. 2
5. 4	15. 3	25. 4	35. 1	45. 2	55. 1	65. 4
6. 3	16. 4	26. 3	36. 2	46. 1	56. 4	66. 2
7. 1	17. 2	27. 2	37. 2	47. 1	57. 4	67. 1
8. 2	18. 3	28. 3	38. 3	48. 2	58. 1	68. 2
9. 3	19. 3	29. 4	39. 1	49. 2	59. 4	69. 4
10. 2	20. 1	30. 4	40. 2	50. 2	60. 4	70. 3

May/June 2010 solutions

QUESTION 1

1.2.1 If consumers expect P beef to ↓, the Demand for beef will ↓ from D1 to D0

1.2.2 Supply increase, the supply curve shifts from S0 to S1

1.2.3 Supply increases from S0 to S1

1.2.4 Increase in demand from D0 to D1

1.2.5 Supply of beef increases from S0 to S1

1.3.1 Price level increases, causing quantity demanded to fall, causing divergence towards the equilibrium price and quantity

1.3.2 Quantity supplied exceeds quantity demanded (excess supply) and there is a surplus in the market

1.3.3 A shortage will exist

1.3.4 Quantity demanded will exceed quantity supplied, creating a shortage

QUESTION 2

2.1.1 Total revenue ↑

Quantity demanded stays the same

2.1.2 Total revenue would be zero

Quantity demanded zero

2.2Offer specials on goods with elastic demand, coefficient >1, quantity demanded responds more to price changes. This would increase total revenue.

2.3 Raise revenue by increasing the price. Total revenue would increase because larger percentages in price hikes would experience lower drops in quantity demanded

QUESTION 3

3.1Economic loss

3.2 Shut down rule: P/MR<TVC. The firm should not produce if it fails to cover its total variable costs. It should not worry about fixed costs as they are sunk costs

3.3.1 It is the upward sloping part of the MC curve above the AVC

3.3.2 Vertical distance between AC and AVC represent the Average Fixed Costs (AFC)

3.3.3 At point c there is productive efficiency

3.3.4 Two things that could change for a perfectly competitive firm in the long run

Entrance of new firms could erode the previously realised abnormal profits, P=Long run Average Costs (every firm earns normal profits)

QUESTION 4

4.1 Draw the diagram

4.2 Type of trade union is a Crafts Union

4.3 Equilibrium condition for the individual firm in a perfectly competitive labour market

4.4 Equilibrium condition for a perfectly competitive labour market is where quantity of labourers demanded = quantity of labourers supplied

4.5 Three factors that could cause a decline in labour demand are :

Trade union activity where they try to influence the wage rate

Government intervention in the labour market through the imposition of minimum wages above the equilibrium wage rate

Factor immobility

Section B

1.2	11.1	21.1	31.3
2.3	12.2	22.2	32.2
3.2	13.1	23.2	33.
4.2	14.3	24.3	34.3
5.2	15.4	25.3	35.2
6.3	16.2	26.5	36.1
7.3	17.2	27.4	37.5
8.2	18.1	28.3	38.5
9.3	19.3	29.4	39.3
10.2	20.1	30.2	40.3