QUESTION 2

2.1) Price elasticity of demand

- The responsiveness of the quantity demanded to a change in price.
- Calculated by:

$$\frac{\% \Delta Q_d}{\% \Delta P}$$

- The above formula allows the calculation of the coefficient of elasticity.
- The coefficient of elasticity may be

> 1

< 1

$= 1$

4 X 1 MARK = 4 MARKS

2.2 Income elasticity of demand

- The quantity demanded of a good depends on the income of a consumer
- Question: By how much will the quantity of a good demanded by a consumer increase or decrease as income changes?
- Calculation:

$$\frac{\% \Delta Q_d}{\% \Delta Y}$$

- Income elasticity of demand could be positive or negative depending on whether income increases or decreases and depending of the type of good involvement, i.e. whether it is a normal good or an inferior good.

4 X 1 MARK = 4 MARKS

2.3 Price elasticity of supply

- Measures the responsiveness of the quantity supplied (Q_S) to a change in the price of a good.
- Price is the independent variable and quantity supplied is the dependent variable.
- Calculation:

$$\frac{\% \Delta Q_s}{\% \Delta P}$$

- The coefficient of elasticity is usually positive because of the positive relationship between price and the quantity supplied.

4 X1 MARK = 4 MARK

2.4 Cross elasticity of demand

- The demand for a god depends on the price of that good but also on the price of related goods.
- Cross elasticity is the ratio between the % Δ Qd of a good and the %ΔP of a related good.
- Calculation:

$$E_C = \frac{\%\ \Delta Qd \text{ of Good B}}{\%\ \Delta P \text{ of Good A}}$$

- Cross elasticity relates to both substitutes and complementary goods

4 X 1 MARK = 4 MARKS

2.5 Normal gods and inferior goods

- The type of good a consumer will consume depends on the available income
- Thus a consumer on a low income wil probably consume more inferior goods, i.e. a good of better/superior quality.
- A consumer would consume a meat product like mince but when the income of such a consumer increases he/she may rather consume steak.

4 X 1 MARK = 4 MARKS

QUESTION 3

3.1 Old price = R25.00
New price = R28.00
Δ price = R 3.00
Ave. price = $\frac{25.00 + 28.00}{2}$
= R53.00
= R26.50

Old Q_d = 1200 kg
New Q_d = 1150 kg
Δ Q_d = 50 kg
Ave. Q_d = 1200 + 1150 kg
= 2350 kg
2
= 1175 kg

$E_d = \frac{\% \Delta Q_d}{\% \Delta P}$

$\% \Delta Q_d = \frac{50}{1175} \times \frac{100}{1}$ %
= 425%

$\% \Delta P = \frac{3}{26.50} \times \frac{100}{1}$
= 11.3%

$E_d = \frac{\% \Delta Q_d}{\% \Delta P}$
$= \frac{42.5}{11.3}$
= 3.8 = 4

QUESTION 3

3.1 P_1 = R25
P_2 = R28
Q_1 = 1200 kg
Q_2 = 1150 kg

$$E_d = \frac{(Q_2 - Q_1) / (Q_1 + Q_2)}{(P_2 - P_1) / (P_1 + P_2)}$$

$$= \frac{(1200 - 1150) / (1200 + 1500)}{(28.25) / (25 + 28)}$$

$$= \frac{50 / 2350}{3 / 53}$$

$$= \frac{376}{4} = 4$$

3.2 TR = P x Q
= R25 x 1200
TR = R30 000 before price increase

1 x 2 MARKS = 2 MARKS

3.3 TR after price increase
$TR_2 = P_2 \times Q_2$
= R28 x 1150
= R32 200

2 X 1 MARK = 2 MARKS

3.4 The coefficient of price elasticity of demand is less than one (= .4).
Thus demand is inelastic.
Because of the demand being fairly inelastic the TR will not decrease much but TR will increase with the price increase.

2 X 1 MARK = 2 MARKS

QUESTION 4

1. Necessities vs. luxuries.
   - Price elasticity of demand for necessities is generally fairly inelastic.
   - Example: milk, electricity
   - Price elasticity of demand for luxury goods is fairly elastic
   - Example: tent; 4x4 vehicles.

4 X 1 MARK = 4 MARKS

2. Availability of substitutes is the most important determinant of a change in quantity demanded when the price of a good changes.
   - If a number of substitutes are available for a good price elasticity of demand will be fairly elastic.
   - Examples: apples, beef, train travel.
   - Goods with no or one or two substitutes available have a fairly inelastic demand.
   - Example: potatoes.

4 X 1 MARK = 4 MARKS

3. Time period under consideration.
   - Price elasticity of demand is greater in the long-run than in the short run.
   - When the price of a good changes, consumers take time to adjust
   - Example: increase in the electricity tariff
   - In the long-run consumers replace electric powered hot water cylinders with solar powered cylinders.

4 X 1 MARK = 4 MARKS

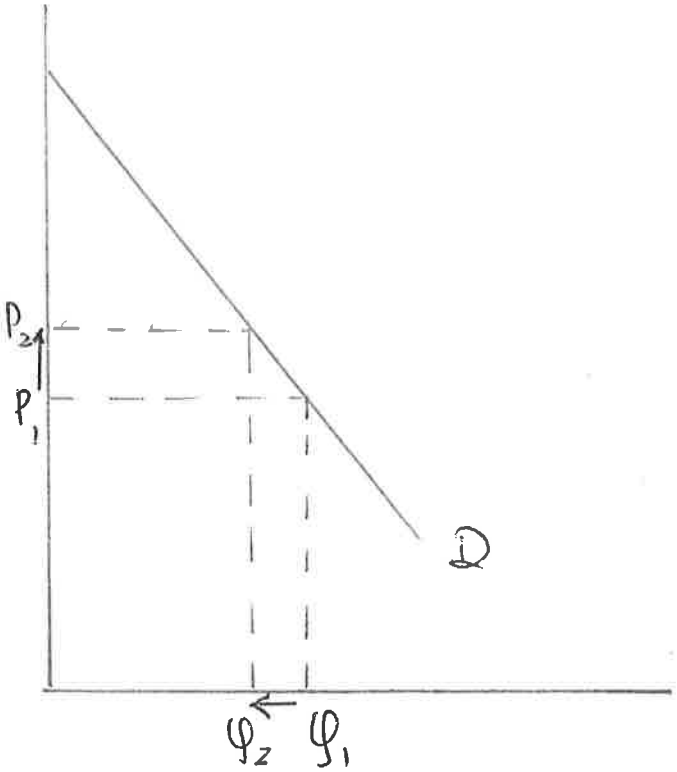
Other factors to consider:

1. Complementary goods
2. The proportion of income spent on the good.

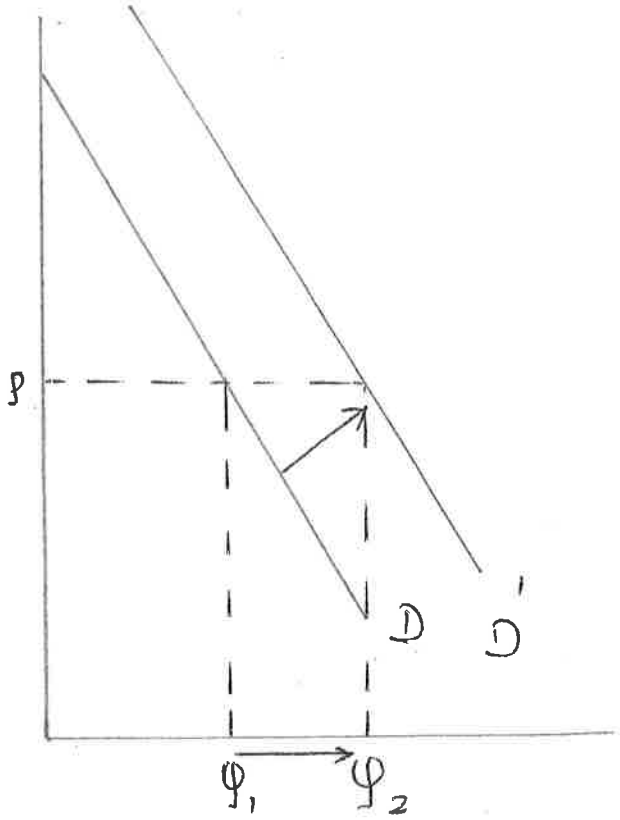
QUESTION 5

- When the price of lamb is increased, the quantity of lamb demanded would decrease.
- Refer to diagram for good A: the price increase from P_1 to P_2 and the quantity decreased from Q_1 to Q_2.
- This constitutes movement along the demand curve and is known as a contraction.
- For chicken, which is a substitute, the demand will increase
- The price of chicken has remained unchanged at P.
- The demand for chicken increases and demand curve shifts upwards to the right from D to D' as in the diagram for good B.

DIAGRAMS: 4 X 1 MARK = 4 MARKS
EXPLANATION = 6 X ½ MARK = 3 MARKS
7 MARKS



GOOD A = LAMB



GOOD B = CHICKEN

QUESTION 1

- Demand is influenced by a series of factors.
- One factor that impacts on demand is the price of a good.
- Thus the demand for a good is said to be subject to the variables price and quantity.
- There is an inverse relationship between price and quantity such that
  - The higher the price the smaller the quantity demanded
  - The lower the price the greater the quantity demanded
- Price changes cause movement along the demand curve.
- Unusually hot weather is a factor, other than price, which causes the quantity demanded to increase.
- Thus such a seasonal change will cause an upward shift to the right of the D-curve.
- If the supply remains the same, especially in the short term, there will be an increase in the price.
- If the D-curve shifts from D to D^1, all other things remaining the same, the equilibrium price will increase from P_E to $P_E{}^1$.

QUESTION 3

$$\triangle P = 3\%$$

$$\triangle Q_d = 6\%$$

$$E_p = \frac{\%\triangle Q}{\%\triangle P}$$

$$= \frac{6\%}{3\%}$$

$$= 2$$

QUESTION 4

- Supply is influenced by a series of factors like price, costs of production, seasonal changes, the discovering of new methods of production.
- A change in price will cause movement along the S-curve.
- Thus a decrease in price will cause a contraction in supply.
- An increase in price will cause an extension in the supply curve.
- Use diagrams to illustrate
- A variable like cost of production will cause a shift in the S-curve.
- An increase in costs of production, ceteris paribus, will cause the S-curve to shift upwards to the left.
- A decrease in costs of production will cause an increase in supply shown by a downward shift to the right of the S-graph.

QUESTION 5

Explain why for many goods, the long-run price elasticity of supply is larger than the short-run elasticity.

- Elasticities of supply differ from the long-run to the short-run.
- For most goods the long-run supply is more price elastic than in the short-run.
- In the short-run firms are subject to capacity constraints.
- Time is required for an increase in capacity because new production facilities take time to erect an set up and to employ the labour required.
- It is possible to increase output in the short-term by using existing capacity more intensively eg. running another shift.
- For some goods and services the the short-run supply is completely inelastic eg. rental accommodation.
- Thus an increase in demand will increase prices (ie. Rental).
- For most goods, firms are able to increase supply in the short-run.
- For this to happen there must be a large enough increase in price as an incentive.
- For most firms increasing the supply of a good will happen less expensively in the long run.
