Skoolumy

CAMBRIDGE A LEVEL ECONOMICS TOPICAL ESSAY QUESTIONS

UTILITY

PAST QUESTIONS

1. (a) Explain what is meant by the concept of the 'equilibrium position of a consumer' and how the concept might be used to construct a demand curve for a good. [12]

(b) Distinguish between the income and substitution effects of a change in a good's price and analyse why the effect of a change in price is not always the same for different goods. [13]

2. (a) Explain what is meant by a 'consumer's equilibrium position' in indifference curve theory and how it can be used to form a demand curve. [12]

(b) One of the world's first filmed singing commercials advertised a soft drink. It stated that, for the same price, consumers would get twice as much of that drink than that of its major rival. This made it cheaper and was similar to a price reduction. Its rival responded by an advertising campaign stating that its own drink was superior to the first firm's inferior product.

Discuss whether it is possible to use diagrams from indifference curve theory to illustrate how a consumer might react to these two advertising campaigns. [13]

3. **Loyalty and consumer behaviour**

Consumer loyalty can be thought of either in relation to card schemes which offer discounts based on the amount spent with a specific retailer, emotional loyalty where customers are loyal to a particular brand, or as a monopoly loyalty where there is no alternative to the retailer or brand.

Retailers recognise that price has an importance in consumers' choice. Many supermarkets use loyalty cards to attract customers with promotions and price reductions available only to those who have a card.

By using cards, supermarkets seek a marketing advantage and attempt to build barriers between retailers. Research indicates, however, that although 70% of United Kingdom (UK) consumers hold some kind of loyalty card, only about 10% are loyal to one particular card.

Concerns have been raised that, when consumers are collecting points towards a particular goal, the loyalty card schemes may act as a constraint on free competition and prevent switching between brands. It is also thought that the costs of the scheme might be funded through higher prices. Further, the incentives and marketing discounts used by the scheme are often thought to be confusing and make it more difficult for the consumer to compare prices. There are risks for retailers too. It requires substantial investment to run such a scheme – one supermarket put the cost at US$60m a year.

But how do loyalty card schemes fit into the context of the way in which consumers make choices? The relative importance of factors that influence consumers when choosing from which shop to buy groceries are one-stop shopping (43%), good service (22%), price (18%), the availability of a coffee shop (12%) and help with packing (6%). Loyalty cards come below these.

Companies who have invested in card schemes use them as a means to gather data on customers. When the loyalty card is used the retailer can see what the customer prefers to buy and can direct future offers to their wants in specific promotions both on-line and in the mail. Loyalty schemes are thus sometimes less about loyalty and more about understanding customers' wants.

The economic model of consumer behaviour using indifference curves assumes that consumers conduct research and buy products and services in a rational way. However, many purchases are based on habit and consumer research is imprecise. When the consumer has a low involvement in research or a low emotional attachment to the product, there will be little loyalty.

Source: RSA Journal 1, 2001, page 83

(a) Analyse why a profit maximising retailer might be interested in the link between utility, consumers' loyalty and price elasticity of demand. [4]

(b) Consider whether there is conflicting evidence in the article about the effectiveness of loyalty cards which offer price discounts. [5]

(c) Discuss how the idea of rationality is used in the indifference curve theory of consumer behaviour. [7]

4. (a) Compare the derivation of a demand curve for a product using the marginal utility theory with the derivation using indifference curve theory. [12]

(b) Discuss whether the existence of (i) inferior goods and (ii) advertising invalidates the underlying assumptions of those theories of demand. [13]

5. (a) Given the prices of two goods, how does economic theory analyse what is meant by 'consumer equilibrium'? [12]

(b) Suppose the price of one of the goods falls. Use indifference curve analysis to discuss whether consumers would always buy more of the good when its price falls. [13]

6. With a perfect market and a given income, economic analysis explains how a rational consumer decides the quantities of which products to demand. It cannot, though, explain what happens when incomes change or when businesses in imperfect markets manipulate prices.

Discuss whether you agree with this opinion about the economic analysis of consumer behaviour. [25]

7. A consumer's demand is sometimes influenced by advertising and sometimes influenced by impulse buying. This means that the economic theories of consumer demand based on utility are of no relevance to a firm trying to determine its likely revenue.

Do you agree with this argument? [25]

8. (a) Explain, using a budget line diagram, whether

(i) the substitution effect of a price change and

(ii) the income effect

would be similar for a normal good and an inferior good. [12]

(b) Discuss the extent to which the law of diminishing marginal utility may be used to determine the market demand for a good. [13]

9. Economic analysis adequately explains how a rational consumer determines a pattern of consumption from a given income in a perfect market with no advertising. It does not explain the more common case of what happens if income changes or if there is advertising. The theory is, therefore, of little merit.

Do you agree with these assertions? [25]

10. The gain in happiness when someone gets an extra dollar is much smaller when the person is rich than if they are poor. So money transferred from rich to poor raises total happiness and governments should seek to make such transfers.

Explain what is meant by the Law of Diminishing Marginal Utility and consider whether the statement above is a correct application of it. [12]

11. (a) Explain what is meant by the income and substitution effects of a price change and discuss why these might be different for different types of goods. [12]

(b) Discuss whether marginal utility theory is a realistic piece of economic analysis in explaining consumer demand. [13]

12. With the help of an indifference curve diagram, assess the extent to which a rise in price would affect the demand for a normal good differently from the demand for a Giffen good. [20]

13. Evaluate the use of indifference curve analysis to derive the demand curve for a normal good and the demand curve for an inferior good. [20]

14. Evaluate whether marginal utility theory can fully explain the link between the changing price of a good and quantity demanded of that good. [20]

MARK SCHEME

1. (a) Explanation of consumer equilibrium using either marginal utility or indifference curves. The equilibrium must be related to a point on the demand curve and then there should be an explanation of how other points on the demand curve might be caused.

L4 (9–12 marks) For a sound explanation of the analysis and a clear link to the demand curve caused by either changes in price or changes in marginal utility. With accurate diagrams and a clear understanding of the principles involved.

L3 (7–8 marks) For an accurate reference to the question but with a more limited explanation showing the effect of a change in price with the budget line but not linked to a demand curve.

L2 (5–6 marks) For a briefer explanation of the analysis and equilibrium position but with no link to the demand curve; or with inaccurate diagrams and weak explanation.

L1 (1–4 marks) For an answer that has some basic correct facts but includes irrelevancies and errors of theory.

(b) A price fall is reflected in a change in the budget line (pivot from point on axis of the good with no price change) with a subsequent change in equilibrium. The equilibrium change involves substitution and income effects. Substitution effect would be in the opposite direction to the price change. The income effect is represented by a parallel shift of the budget line is in the same direction as the substitution effect for the normal good but in the opposite direction for an inferior and Giffen good. Demand will increase for a normal good, but the extent will depend on elasticity, it will increase for an inferior good but not as much as for a normal good. For a Giffen good the final demand is less than the original demand.

L4 (9–13 marks) For a reasoned and clear discussion, logically presented dealing with income, substitution effects and at least two different types of good, (normal, inferior, Giffen).

L3 (7–8 marks) For a fair but undeveloped discussion probably concentrating on income, substitution. Mention might be made of different elasticities of a normal

good or of the difference between normal goods and inferior/Giffen. There would be only a brief comment on the individual demand curve or no discussion about the demand curve.

L2 (5–6 marks) For a limited explanation with a lack of development of both income/substitution and different types of good.

L1 (1–4 marks) For an answer that has some basic correct facts but includes irrelevancies and errors of theory.

2. (a) Explanation of consumer equilibrium using indifference curves. Equilibrium position should be determined initially, then for a change in price.

L4 (9–12 marks): For a sound explanation of the analysis and a clear comment on how a demand curve is formed. A clear understanding of the principles involved.

L3 (7–8 marks): For an accurate reference to the question but with a more limited analysis probably without a good explanation of the construction of a demand curve.

L2 (5–6 marks): For a briefer explanation of the analysis and equilibrium position but with no link to the demand curve.

L1 (1–4 marks): For an answer that has some basic correct facts but includes irrelevancies and errors of theory.

(b) Analysis of income and substitution effects. The first drink could possibly be represented by a shift in the budget line for a price reduction. The consumer might substitute it for the rival drink. But the notion of a more superior drink might result in a negative income effect.

L4 (9–13 marks): For a clear analysis of income and substitution effects and a reasoned account of the changes in consumer equilibrium using both effects. Accurate diagrams.

L3 (7–8 marks): For a weaker analysis of the two effects or diagrams which contain slight inaccuracies.

L2 (5–6 marks): For a poor analysis and weak diagrams confusingly presented.

L1 (1–4 marks): For an answer that has some basic correct facts but includes irrelevancies and errors of theory.

3. (a)

- Loyalty will mean consumers do not change suppliers, this might create a lower price elasticity of demand, (1)
- Explain price elasticity (1)
- With lower price elasticity can subsequently raise prices with resulting higher profits – depending on cost changes (2)

(b) Evidence for the effectiveness of cards:

- Cards enable retailers to find out about consumer wants and target promotions;
- Article also says retailers recognise the importance of price and can offer discounts through cards. (2)

In contrast to that it also says

- Price is not most significant factor in determining choice;
- Also there is no loyalty if buying is based on habit, or has low emotional involvement. (2)

Conclusion: seems to be some conflict. (1)

(c) Explanation of indifference curves. General description without link to rationality max 4

Consumer knows combinations between which there is indifference, this is a rational calculation which remains constant over the curve, Consumer knows satisfaction levels and which combination is preferred to another,

Consumer rationally compares satisfaction to price, and buys to achieve maximum satisfaction

Consumer can compare two goods using rational deductions.

4. (a) Indifference curve theory shows the quantities of two goods bought as price changes; it requires a separate diagram for each good to show the quantity bought at each price. Utility theory compares the total and marginal utility to the price, the quantity bought can be shown on the same diagram.

Level 4 (9–12 marks): for a sound explanation of both budget lines and indifference curves and a clear link to the separate demand curve, sound explanation of link between utility, price and demand, with accurate clear diagrams and a clear understanding of the principles involved.

Level 3 (7–8 marks): for an accurate reference to the question but with a more limited explanation, perhaps omitting a clear explanation of utility or a clear link to the demand curve, or with minor errors in the analysis or in the diagrams.

Level 2 (5–6 marks): for a briefer explanation of the equilibrium position but with no link to the demand curve; or with inaccurate diagrams and weak explanation.

Level 1 (1–4 marks): for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

(b) Inferior goods would result in a different outcome when prices change from the outcome of a normal good, but they do not invalidate the underlying assumptions of the theory. Indifference curve theory can show more precisely why the difference occurs using income and substitution effects. Advertising does not necessarily invalidate the theory but it could be that persuasive advertising results in more being purchased at a higher price – this could still be explained using the theory as either utility is perceived as changing, or can be shown using the indifference curve diagrams. The assumptions have not changed.

Level 4 (9–13 marks): for a reasoned and clear discussion, logically presented dealing with income, substitution, inferior and advertising.

Level 3 (7–8 marks): for a fair but undeveloped discussion probably concentrating on income, substitution of inferior goods or persuasive advertising, but still with a conclusion.

Level 2 (5–6 marks): for a briefer discussion of both inferior and advertising.

Level 1 (1–4 marks): for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

5. (a) Analysis of the meaning of utility and the analysis of the equi-marginal principle which underlies an individual demand curve. Equilibrium could be explained either with reference to marginal utility/price or by using indifference curves.

L4 (9–12) For a reasoned analysis linked to more than one good and clearly structured answer which deals with a relation between utility, price and a given demand.

L3 (7–8) For a fair analysis of utility but an undeveloped answer which deals with more than one good but does not link equilibrium to demand.

L2 (5–6) For a limited attempt which does not clearly determine the equilibrium position for more than one good.

L1 (1–4) For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial.

(b) Discussion of income and substitution effects and resulting demand. Both normal and inferior goods lead to consumers buying more of the product but not the same amount extra. Fewer items would be bought with a Giffen good.

L4 (9–13) For an good discussion of income/substitution effects linked to normal, inferior and Giffen goods and clearly structured answer with a conclusion about what happens as prices change.

L3 (7–8) For a fair discussion but undeveloped answer probably dealing with two of the types of good, or not clearly distinguishing income and substitution effects but still with some comment about what happens when prices change.

L2 (5–6) For a limited attempt which does not determine the differences between the types of good or does not show the income and substitution effects.

L1 (1–4) For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial.

6. There are three aspects to consider. Candidates should explain utility theory and consumer equilibrium. They should then consider whether the theory allows for account to be taken of a change in income and whether the existence of imperfect markets and price fixing might be included in the theory. (Both can be included). They should then consider whether the overall conclusion of the argument is correct.

L4 (18–25) For a thorough explanation of the theory and a reasoned discussion of the results of a change in income and of imperfect markets. A conclusion should be given.

L3 (14–17) For a competent explanation of the theory but a more limited discussion of the other elements in the statement. Probably the income aspect will be better dealt with than the imperfect markets. There should still be a conclusion.

L2 (10–13) For a correct but undeveloped explanation of the theory and only a brief discussion of the other elements to the question. There will not be a conclusion.

L1 (1–9) For an answer which shows some knowledge but does not indicate that the question has been fully grasped, or where the answer is mostly irrelevant.

7. Candidates should form a structured answer which first debates whether demand is influenced by advertising or impulse buying. Persuasive advertising/impulse buying could still be related to a belief in potential utility and could still be the result of a rational decision. Candidates should then consider the link between potential demand and revenue, mentioning elasticity. Firms hope to create an increase in demand by advertising. However, this may mean future demand is more unpredictable and, therefore, potential revenue more uncertain, than with known – maybe annual– expectations of change.

L4 (18–25) For a thorough explanation of the terms, a clear discussion of the parts of the argument, including an analysis of utility, with a discussion of the conclusion of the argument.)

L3 (14–17) For a competent discussion which does not fully analyse the parts of the argument and does not fully develop a link leading to a conclusion but makes an attempt at an evaluation. (No analysis of utility L3 max).

L2 (10–13) For an accurate though undeveloped explanation with some attempt at analysis but with only a limited evaluation.

L1 (1–9) For an answer which shows some knowledge but does not indicate that the question has been fully grasped, or where the answer contains irrelevances and errors of theory.

8. (a) Substitution effect would be in the opposite direction to the price change for both goods. Budget line pivots from a point on one axis (6) The income effect is in the same direction as the substitution effect for the normal good but in the opposite direction as the substitution effect for the inferior good. Budget lines alone would not enable the determination of the actual amount bought.

L4 For a sound explanation of both changes with an accurate clear diagram and a clear understanding of the principles involved 9–12

L3 For an accurate reference to the question but with a more limited explanation perhaps concentrating on one of the types of good, or minor errors in the analysis or in the diagrams 7–8

L2 For an explanation of one of the changes for both goods or both the changes for one good, or a combination of the two but with inaccurate diagrams to support the text 5–6

L1 For an answer which has some basic correct facts but includes irrelevancies and errors of theory 1–4

(b) Explanation/discussion of DMU and its link to the amount a consumer is willing to buy and the formation of an individual demand curve. Discussion of calculation of market demand curve by adding individual demand curves.

L4 For a reasoned and clear discussion, logically presented 9–13

L3 For a fair but undeveloped discussion probably with either a brief comment about the individual demand curve or no discussion about the market demand curve 7–8

L2 For a limited explanation with only a brief comment 5–6

L1 For an answer which has some basic correct facts but includes irrelevancies and errors of theory 1–4

9. There are three different parts to the argument. Candidates should explain utility theory and consumer equilibrium. They should then consider whether the theory allows for account to be taken of a change in income and whether the existence of advertising, which could provide more information and increases rational choice, might be included in the theory. Even if the advertising is purely persuasive the belief that it is correct might also be considered to be the basis for a rational choice. They should then consider whether the overall conclusion of the argument is correct.

L4 For a thorough explanation of the theory and a reasoned discussion of the results of an change in income and of the influence of advertising. [18–25]

L3 For a competent explanation of the theory but a more limited discussion of the other elements in the assertion. Probably the income aspect will be better dealt with than the advertising. [14–17]

L2 For a correct but undeveloped explanation of the theory and only a brief discussion of the other elements to the assertion. [10–13]

L1 For an answer which shows some knowledge but does not indicate that the question has been fully grasped, or where the answer is mostly irrelevant. [1–9]

10. Candidates should explain marginal utility and then develop the theory of diminishing marginal utility. Money has a diminishing marginal utility as does any good according to some. There are, though, exceptional goods where marginal utility increases as the quantity used/owned increases; some would argue money is in this category. Whether it is possible to add utilities for different people to calculate total welfare is debateable, as is the possibility of comparing total utilities between people. A sub-conclusion on this section is required and then the argument should be related to the second part of the statement. If money does have diminishing utility the total happiness would be increased in theory – although even in theory it is not really possible to add utilities and form a social welfare function. In practice changes in satisfaction are pure guesswork and optimum distribution through government policy is unlikely.

L4) For a sound explanation of each part and a clear understanding of the principles

involved. [9 - 12]

L3) For a competent comment but with limited elaboration of the analysis. [7 - 8]

L2) For a correct explanation of part of the analysis. Candidates might explain only two of the parts of the statement. [5 - 6]

L1) For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial. [1 - 4]

11. (a) Explanation of income role of income and price in the two effects. Indifference curves are not on the syllabus but budget lines are.

L4) For a reasoned and clear explanation with accurate development of theory.

9 - 12

L3) For a fair but undeveloped explanation.

7 - 8

L2) For a limited but acceptable attempt to consider the effects.

5 - 6

L1) For an answer which has some basic correct facts but includes irrelevancies and errors of theory.

1 – 4

(b) Discussion of difficulties of interpreting marginal analysis. Measurement of utility, measurement of value of marginal unit, problem of relating marginal utility/price of various goods, difficulties of adding utilities. Pareto is not required but the principle of someone better off without anyone worse is on syllabus – as is cost benefit analysis.

L4) For a reasoned and clear evaluative comment.

9 - 13

L3) For a limited but acceptable attempt to consider the possible limitations of the theory.

7 – 8

L2) For a descriptive account of the theory of marginal utility.

5 - 6

L1) For an answer which has some basic correct facts but includes irrelevancies and errors of theory.

1- 4

12. AO1 and AO2 out of 14 marks.

AO3 out of 6 marks.

Indicative content

Responses may include:

AO1 Knowledge and understanding and AO2 Analysis

Diagram showing Indifference curves, budget lines and price lines.

- Changes in budget lines representing a rise in price.
- Diagrams of resultant path of consumption showing differences in substitution and income effects for normal and Giffen goods.
- Comment on changes in overall demand based on changes in income and substitution effects.
- Up to Level 2 only if no diagram.

AO3 Evaluation (max 6 marks)

- Comment on extent of changes would vary depending on the price elasticity of demand
- It would also depend on the slope of the indifference curve and the marginal rate of substitution.

AO1 Knowledge and understanding and AO2 Analysis 14

AO3 Evaluation 6

13. AO1 and AO2 out of 14 marks. AO3 out of 6 marks.

Indicative content

Responses may include:

AO1 Knowledge and understanding and AO2 Analysis

• Assumptions of indifference curve analysis including:

• rational consumers who prefer more to less,

• a two-good world,

• the prices of the goods are (initially) constant,

• the goods can be substituted for each other,

• transitivity, if there is indifference between A and B and indifference between B and C, there is indifference between A and C

• perfect knowledge of the market.

• Definition of an indifference curve (IC), explanation of convex IC and analysis of rising levels of satisfaction and the creation of an IC map.

• Definition of a budget line (BL) and analysis of rising/falling income levels on the BL and consumption

• Explanation of the substitution effect (SE) and the income effect (YE) when the price of a good changes.

• Analysis of the effect of a positive and negative YE when combined with the SE to account for a normal and inferior good.

• The combination of the IC and BL maps to show point of tangency between IC and BL to give a combination of the 2 goods that gives the highest level of satisfaction given the level of income.

AO3 Evaluation

• Consumer rationality: indifference analysis assumes that consumers act rationally. They are of a calculating mind, carrying numerous combinations of different commodities in their heads, can substitute one for the other, compare their total utilities and make a rational choice between various combinations of goods.

•As the effect of a reduction in price is an increase in demand for both a normal and inferior good (except in the case of Giffen good) it is not possible to know whether a good is normal or inferior.

• It is difficult to apply the concept of substitutability to goods such as consumable durables, which are one-off indivisible purchases and the choice is between, for example, 1 fridge and 4 weeks' food.

• A consumer is faced with a much more complex world than the two-good world of the model because a consumer buys not just two but a large number of commodities to satisfy their innumerable wants.

• IC analysis is a static analysis and consumer preferences may change over time.

• Accept all valid responses.

AO1 Knowledge and understanding and AO2Analysis 14

AO3 Evaluation 6

14. AO1 and AO2 out of 14 marks. AO3 out of 6 marks.

Indicative content

Responses may include:

AO1 Knowledge and understanding and AO2 Analysis

• Definitions of marginal and total utility.

• Explanation of total utility and diminishing marginal utility.

• Analysis of the effect of a change in price through the equi-marginal principle and illustration of the effect with a diagram.

• Diagram of the falling demand curve v price, which can apply to both normal and inferior (non-Giffen) goods but the theory does not distinguish between them.

AO3 Evaluation

• Discussion of the validity of the rational consumer. Imperfect information, bounded rationality, impact of advertising.

• Unable to distinguish between the income and substitution effects and therefore does not account for Giffen goods.

• The difficulty of the ceteris paribus assumption that other things do not change when in practice they do. Each change would require a reestimation of the demand schedule.

• The assumption that money has constant utility. Is the last dollar of someone earning $10 000 the same value as someone earning $100 000.

• Difficulty of MU theory accounting for the purchase of a one-off good e.g. a house.

Accept all valid responses.