

Cambridge Assessment International Education

A2 Level | 9708

ECONOMICS

TOPICAL PAPER 4

DATA RESPONSE

June 2002 – March 2022

All Variants

MARK SCHEME

CAIE 2023-2024-2025 Syllabus

Compiled By:

SAEED AFZAL

A Level Visiting Faculty at:

BSS-ALJT | UCL | SISA | Pak Turk (Boys & Girls)

M.A Economics / MBA

MA Political Science

M. Phil Economics

Contact: 03004267375



Airport Road :
Shop 23-24, Basement Faysal Bank,
Near Yasir Broast, Airport Road,
Bhatta Chowk Lahore.

Tel: 0321-4567519 / 35700707

DHA Ph-VI:
320 - MB,
Commercial Area
DHA Phase 6 Lahore.

Tel: 0320-4567519 / 0423-7180077


Johar Town :
Opp. Beaconhouse JTC
Adjacent Jamia Masjid PIA
Society Shadewal Chowk,
Johar Town Lahore.

Tel: 0313-4567519 / 35227007

Bahria Town:
70 - Umer Block
Main Boulevard
Commercial Area
Bahria Town Lahore.

Tel: 0315-4567519

 studentsresource.net

 [studentsresourc](https://twitter.com/studentsresourc)

 [/students.resource](https://facebook.com/students.resource)

 [/students.resource](https://instagram.com/students.resource)


Book Title: A Level Economics Topical Paper 24

Syllabus Code 9708

Compiler: Saeed Afzal

Syllabus: for 2023-2024-2025 exams

Edition: 2023

Published by:  **STUDENTS RESOURCE** Airport Road 0423-5700707

Price: 1400/-

COPYRIGHT **©STUDENTS RESOURCE® 2022**

The rights of Students Resource being Publisher of this book has been asserted by him in accordance with the Copy Right Ordinance 1962 of Pakistan.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the Students Resource or under licence from the Registrar Copyright from Intellectual Property Organization Pakistan.

The syllabus contents and questions from past papers used herein are the property of Cambridge Assessment International Education (CAIE). The use of syllabus and questions from past papers used in this book does not vest in the author or publisher any copyright ownership, nor does the use of CAIE material imply any affiliation with CAIE.

Any individual or institution violating the copyrights will be prosecuted in the court of law under the lex-forei of Pakistan at his/their expense.

No further notes and legal warning would be issued for any kind of legal activity.

Legal Advisor



Content: A2 Economics P4 Topical

MICROECONOMICS		
1	Consumer Behaviour Analysis	5
2	Theory of Production and Cost	37
3	Market Structure (Perfect and Imperfect Markets)	51
	3.1 Significance of MC, AVC, ATC, TFC, TVC, LATC for profit maximising firm	52
	3.2 Price and output determination in perfect competition, monopoly, monopolistic competition, Oligopoly (Short-run and Long-run), Game Theory	57
	3.3 Objectives of Firms, Principal Agent Problem	80
	3.4 Price Discrimination	89
	3.5 Contestable Market	93
4	Economic Efficiency, Market Failure, Government Failure, Government Interventions, Cost Benefit Analysis (CBA)	95
5	Labour Market	129
	5.1 Wage Determination in Perfect and Imperfect Markets	130
	5.2 Wage Inequalities, Wage Differentials	151
	5.3 Role of Trade Union in Wage Determination	163
MACROECONOMICS		
6	Inequalities and Policies to make Distribution of Income Equal	171
7	Economic Growth and Economic Development	177
	7.1 Indicators of living standard	178
	7.2 Factors, causes and effects of economic growth and developments	197
	7.3 Features, Problems & Characteristics of Developing & Developed Countries	211
	7.4 Government Policies to Promote Economic Growth and Development	225
8	Classical and Keynesians Theory of Income and Employment (2,3 & 4 Sectors)	235
	8.1 Determination of Equilibrium level of National Income, Multiplier and Accelerator. Inflationary and Deflationary Gaps	236
	8.2 Determinants of investment. Paradox of thrift	249
9	Determination of Interest Rate	255
	9.1 Liquidity Preference Theory. Loanable fund theory	256
	9.2 Functions & Characteristics of Money Specialization, Division of Labour	269
10	Macroeconomic Problems, Objectives and Policies	273
	10.1 Structure & use of Fiscal, Monetary & Supply-side Policies, Money & Banking. Laffer Curve, Philips Curve	274
	10.2 Macroeconomic aims and conflict in Aims	297
11	Unemployment	315
	11.1 Causes, Types, Effects and measurement of unemployment. Polices to reduce unemployment	316
12	Balance of Payment (BoP)	327
	12.1 Structure of BoP Account	328
	12.2 Causes of BoP Disequilibrium (BoP Deficit), (BoP Surplus)	329
	12.3 Effects of BoP Deficit or Surplus	331
	12.4 Government Policies to Correct BoP Deficit (Devaluation and Overvaluation)	332
13	Exchange Rates	339
	13.1 Determination of Exchange Rate (ER)	340
	13.2 Types, Fixed ER, Managed Floating ER. (A2), Flexible ER. (AS)	341
	13.3 Effects of Devaluation and Overvaluation of Currency	348
14	Data Response	351
A.	Micro Economics	352
B.	Macro Economics	407
	Cambridge Specimen Paper 2 for 2023-2025 Exams	481

PREFACE

This topical past papers book is designed according to new Cambridge Syllabus of Economics 2023-2024 and 2025 for Paper 4 (Variant 41, 42 and 43). A Level Economic book and teacher guide published or recommended by Cambridge are not sufficient for getting A* in CAIE exams but detailed practice of topical past paper questions from different variants is also essentials. These questions are categorized in chapters and sub-topics. I hope this book will be helpful for students and teachers.

Saeed Afzal

M.A Economics / MBA

MA Political Science and M. Phil Economics

Write a comment.....

Your feedback is warmly welcomed. Feel free to suggest us for improvements if you have any comments; kindly send us at +92 300 4267 375 or +92 3234567 519

The Author

MICROECONOMICS

Unit 1

Consumer Behaviour Analysis

A2 Economics 9708 Topical Paper 4

Saeed Afzal
03004267375



In this chapter

You will practice the following topics:

1.1 Consumer Behaviour Analysis

2021

Question 1

9708/43/O/N/21/Q3

- (a) Explain the theory of how a consumer decides to achieve the situation described as 'equilibrium' when purchasing two different products. [12]
- (b) Two shops sell clothes. One has luxury fashionable designs. The other has cheaper inferior alternatives. Both shops decided to have promotional sales with price reductions. Consider how indifference curve analysis could be used to explain a consumer's reaction to both the price reductions. [13]

MARK SCHEME

(a) Marginal utility is significant in relating the utility/satisfaction to the price in determining equilibrium quantity bought. Candidates can use either MU theory or marginal changes on indifference curves related to budget lines. If MU is used, they must relate it to two products.

L4 (9–12 marks): for a clear explanation and a sound comment on the relation between the price and the satisfaction obtained, referring to more than one good.

L3 (7–8 marks): for a less developed answer but which still refers to the equilibrium but probably concentrates on only one good with MU or is unclear about the relevance of the tangency with indifference curves.

L2 (5–6 marks): for a brief attempt which does not clearly bring out the significance of the marginal analysis.

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

(b) Analysis and comment on income and substitution effects using indifference curves of a price change for a luxury good and an inferior good.

L4 (9–13 marks): for an understanding of the meaning of the two concepts and a correct analysis of the direction of change for both concepts for both types of good.

L3 (7–8 marks): for a less accurate understanding – probably evidenced by a weak analysis of the income effect on inferior goods, or a confusion with a Giffen good.

L2 (5–6 marks): for an unclear answer which distinguishes between the effects but gets the direction of change incorrect; or one that concentrates on one type of good.

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

Question 2

9708/42/O/N/21/Q3

- (a) Use marginal utility analysis to explain the derivation of the individual demand curve for a good. [12]
- (b) Use indifference curve analysis to discuss whether the demand curve for a good will always slope downwards. [13]

MARK SCHEME

(a) Marginal utility analysis:

Explanation of total utility (*TU*) and marginal utility (*MU*) and falling *MU*. Link to ratio of MU_x to P_x . Principle of equi-marginal equality explained. $MU_x/P_x = MU_y/P_y$

Development of the effect of a change in P_x on MU_x and thus demand by an individual. Conversion to an individual's demand curve and then a market demand curve.

L4 (9–12 marks): For an answer that gives a sound explanation of the change in equilibrium when the price of one good changes in relation to the price of another good. The equi-marginal principle is used to analyse this effect. Extension of individual demand to market demand curve. Max 9 For individual demand curve with no reference to the market.

L3 (7–8 marks): For an answer that develops the analysis to the equimarginal principle in relation to two goods and then attempts to determine an individual demand curve.

L2 (5–6 marks): For an answer that explains total and marginal utility and its link to the purchase of one good.

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

(b) Indifference curves, budget lines defined, the effect of shifts in the price and the budget line. Split of change in quantity demanded into income effect (*IE*) and substitution effect (*SE*). Impact of the size and sign of such changes on the slope of demand curve.

L4 (9–13 marks): For an answer that discusses the influences of the size and the sign of the *IE* and *SE* on the effect on demand of a change in the price of a good and recognises this may produce an upwards sloping demand curve. A conclusion is reached for 12/13 marks.

L3 (7–8 marks): For an answer that analyses the effect of a change of price on the demand for a good and includes reference to *IE/SE*.

L2 (5–6 marks): For an answer that describes budget lines and indifference curves and identifies the equilibrium position.

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

Question 3

9708/42/M/J/21/Q3a

Use indifference curve analysis to explain how an individual's demand curve for an inferior good is derived. [12]

MARK SCHEME

Definitions and explanations of Indifference curves (*IC*) and budget line (*BL*). The use of tangency of *IC* to *BL* to determine demand. The shift of the *BL* to reflect price change. The connection of changes in price to the shape of the demand curve, or candidates may suggest a change in income and the budget line shift causing a shift in the demand curve for an inferior good.

L4 (9–12 marks) For an answer which explains the meaning of indifference curves and budget line. The analysis of the effect of a change in price shifting the *BL* and the effect on demand. The derivation of the demand curve is explicit using reference to the income and substitution effects, or a shift of the demand curve for a change in income.

L3 (7–8 marks) For an answer which explains the meaning of indifference curves and budget line. The analysis of the effect of a change in price shifting the *BL* or a shift in the *BL*.

L2 (5–6 marks) For an answer which explains the meaning of indifference curves and budget line.

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

Question 4

9708/43/M/J/21/Q3

(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]

MARK SCHEME

(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 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.

2020

Question 1

9708/43/O/N/20/Q3

- (a) Examine the analysis behind the downward sloping demand curve for a normal good. [12]
- (b) Use indifference curve analysis to discuss why a manufacturer might be interested in a consumer's reaction to an equal rise in price for a normal good and a Giffen good. [13]

MARK SCHEME

- (a) Explanation of consumer equilibrium, its link to price changes and the construction of the demand curve. Either marginal utility or indifference curves may be used. Both determine the maximum satisfaction for a consumer. One relates the equilibrium directly to a point on the demand curve, the other does not.
- L4 (9–12 marks)** for a sound explanation of the analysis and a clear comment on how a demand curve is formed as price changes affect equilibrium. A clear understanding of the principles involved.
- L3 (7–8 marks)** for an accurate reference to the question but with a more limited development probably without a good explanation of the construction of a demand curve. The answer will probably just refer to one point on the demand curve and not deal with price changes.
- L2 (5–6 marks)** for a briefer explanation of the analysis and equilibrium position but with no clear 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) Discussion of effect on demand of a rise in price for normal, inferior, Giffen goods and for goods with different elasticities. The manufacturer would be interested in the effect on revenue of any change in price and the effect would depend on the type of good.
- L4 (9–13 marks)** for a clear analysis of price, income, substitution and an evaluation of different goods and link to revenue. Diagrams should be accurate.
- L3 (7–8 marks)** for a less precise analysis with minor errors in the diagrams and with a less competent link to revenue.
- L2 (5–6 marks)** for an answer that confuses income and substitution or does not comment on the revenue aspect.
- L1 (1–4 marks)** for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

Question 2

9708/41/O/N/20/Q3

- (a) Compare and contrast the derivation of a consumer's demand curve using Marshall's marginal utility analysis with a consumer's demand curve derived by indifference curves. [12]
- (b) Discuss how the effect of a rise in a sales tax (goods and services tax) can be analysed using indifference curve analysis. [13]

MARK SCHEME

- (a) Marshall's utility requires a precise calculation of marginal utility, and by relating MU to price, has a direct link to the construction of a demand curve.

Indifference curve theory shows different quantities of two goods bought as either income or price changes; changes in amounts bought can be split into income and substitution effects and different types of goods more readily distinguished than with Marshall's theory. However there is no direct link to a complete demand curve which shows demand against price. The analysis does not require an absolute 'cardinal' measurement of utility in 'utils' but it still requires a measurement satisfaction which in reality is unrealistic.

- L4 (9–12 marks)** for a sound explanation of the analysis and a clear understanding of the principles involved with an accurate comment on the differences between the two approaches in the link to demand curves.
- L3 (7–8 marks)** for an accurate reference to the question but with a more limited evaluation or with minor errors in the analysis.
- L2 (5–6 marks)** for a briefer explanation of the analysis and a more one-sided comment on the differences.
- L1 (1–4 marks)** for an answer that has some basic correct facts but includes irrelevancies and errors of theory.
- (b) Rise in sales tax changes price, represented by a pivot of the budget line. This will change demand via income and substitution effects.
- L4 (9–13 marks)** for a sound explanation of the analysis and a clear understanding of the principles involved. A pivot of the budget line, a link to demand, and a comment on the extent of the change in demand, mentioning elasticity.
- L3 (7–8 marks)** for an accurate reference to the question but with a more limited evaluation or with minor errors in the analysis.
- L2 (5–6 marks)** for a briefer explanation of the analysis of the indifference curve diagram but with no reference to a demand curve or to elasticity.
- L1 (1–4 marks)** for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

Question 3

9708/43/M/J/20/Q3

- (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]
- 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.
- (b) 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]

MARK SCHEME

- (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.

Question 4

9708/42/M/J/20/Q2

- (a) Use indifference curve analysis to explain the derivation of an individual demand curve for a normal good.** [12]
- (b) Discuss, using indifference curve analysis, whether the demand for a good always increases when its price falls.** [13]

MARK SCHEME

- (a)** Income and substitution effects need to be explained and applied in the context of a falling price. The three alternatives: i) YE & SE are both positive and reinforce each other, ii) YE is negative & SE is positive but more than YE and iii) YE is negative but greater than SE are.
- L4 (9–13 marks):** For an answer which concentrates on either the fall in income, and impact on demand or the fall in price showing the movement of the BL and the impact on the quantity demanded. Discussion of the significance of the income effect and the substitution effects. Accurate diagrams. Max 11 if no conclusion.
- L3 (7–8 marks):** For an answer which concentrates on either the fall in income, and impact on demand and the fall in price showing the movement of the BL and the impact on the quantity demanded.
- L2 (5–6 marks):** For an answer which concentrates on either the fall in income, and impact on demand or the fall in price showing the movement of the BL and the impact on the quantity demanded.
- L1 (1–4 marks):** For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial.
- (b)** Definitions of fixed and variable costs and long and short run. Need to cover variable cost in the short run, shut down if variable costs not covered in short run. Need to cover both fixed and variable cost (total costs) in the long run.
- L4 (9–12 marks):** For a thorough explanation of fixed and variable costs linked to both the short and long run, clear identification that all costs are variable in the long run, together with explanations of their relevance to the survival of a perfectly competitive firm.
- L3 (7–8 marks):** For an answer which concentrates on either the short run and the long run or variable and fixed costs with reference to profits.
- L2 (5–6 marks):** For limited correct comments on types of costs.
- L1 (1–4 marks):** For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial.

Question 5

9708/42/M/J/20/Q3

- (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]

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.

- (b) 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]

MARK SCHEME

- (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.

Question 6

9708/42/F/M/20/Q3

- (a) Explain the link between a consumer's rational behaviour, marginal utility, prices of different goods and the demand for a good. [12]

- (b) To what extent may the demand theory based on indifference curves be considered superior to that derived from marginal utility? [13]

MARK SCHEME

- (a) Explanation of idea that a rational consumer aims to maximise utility; this involves a comparison of marginal utility with prices which determines the amount demanded

L4 (9–12 marks): for a reasoned and clear explanation, logically presented dealing with each point and an accurate link to the demand curve as prices change

L3 (7–8 marks): for a fair but undeveloped explanation probably concentrating on the equilibrium condition but not fully linking the idea to the demand curve or dealing with only one point on the demand curve ignoring price changes

L2 (5–6 marks): for a briefer explanation, probably not fully explaining the equilibrium when there is more than one good and 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) Indifference curve theory shows the quantities of two goods bought as either income or price changes; changes in amounts bought can be split into income and substitution effects and different types of goods more readily distinguished

The analysis does not require an absolute measurement of utility in 'utils' only a recognition that 'higher' curves indicate more satisfaction. It still requires some identification of satisfaction to construct the precise level of the curve which in reality is unrealistic. The indifference curve diagram also has no direct representation of demand against price.

L4 (9–13 marks): for a sound explanation of the analysis and a clear understanding of the principles. A consideration of both the possible advantages and disadvantages of using indifference analysis should be presented.

L3 (7–8 marks): for an accurate reference to the question but with a more limited evaluation or with minor errors in the analysis.

L2 (5–6 marks): for a briefer explanation of the analysis and a more one-sided comment on the differences.

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

2019

Question 1

9708/43/O/N/19/Q3

(a) Critically discuss the explanation in economic theory of how a rational consumer exercises choice and how it links to a demand curve. [12]

(b) Analyse how a consumer's equilibrium might change if the government increased a sales tax (goods and services tax) on a normal good, an inferior good and a Giffen good. [13]

MARK SCHEME

(a) Explanation of diminishing marginal utility or indifference curves and the link to equilibrium price and, through changes in price, to the demand curve; critical comment on the difficulty of calculating marginal utility and its application.

L4 (9–12 marks): For a sound explanation of the analysis and a clear understanding; explanation of link to demand; with a comment on the possibility of calculating marginal utility.

L3 (7–8 marks): For a competent comment but with limited development of the analysis – may be no clear link to demand – and a very brief critical comment. **L2 (5–6 marks):** For a brief explanation and with no clear link between equilibrium and demand and no critical comment.

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

Analyse how a consumer's equilibrium might change if the government increased a sales tax (goods and services tax) on a normal good, an inferior good and a Giffen good.

(b) Explanation of changes in consumer equilibrium using indifference analysis to distinguish between the types of good. Indirect tax will increase the price and the answer really needs to consider the distinction between income and substitution effects.

L4 (9–13 marks): For a clear analytical discussion of effect of an indirect tax increase is to increase price; income and substitution effect move in same direction for normal good, in opposite directions for inferior good but a price rise would still result in a fall in demand; they move in opposite direction for a Giffen good but a rise in price will lead to a rise in demand.

L3 (7–8 marks): For an understanding of a rise in tax causing a rise in price but a clear analysis/discussion of the effect on only two of the goods.

L2 (5–6 marks): For a weaker understanding of the effect of the tax change and a poor analysis of the income and substitution effects, maybe just concentrating on the utility explanation or elasticity.

L1 (1–4 marks): For an answer that shows some knowledge but does not indicate that the question has been fully grasped or where the answer is mostly irrelevant.

Question 2

9708/42/O/N/19/Q3

- (a) Explain what is meant by a normal good and comment on the link between total utility, marginal utility and a consumer's demand curve for that good. [12]
- (b) Discuss how a government's policies toward income and wealth distribution can affect a consumer's demand. [13]

MARK SCHEME

(a) Definition of a normal good, explanation of total utility and links to total consumption. Derivation of falling marginal utility as consumption increases linked through equi-marginal consumption and price change of a product to the demand curve.

L4 (9–12 marks): For clear explanations of the three terms and reference to the demand for a good. Establishment of the equi-marginal rule $MU_x/P_x = MU_y/P_y$. The effect of a change in price of a good on the ratio and the need to adjust the quantity demanded and hence MU in order to return to equilibrium **must** be explicitly stated.

L3 (7–8 marks): For clear explanations of two of the terms and reference to the demand for a good. Establishment of the equi-marginal rule $MU_x/P_x = MU_y/P_y$.

L2 (5–6 marks): For a clear explanation of 2 of the terms and an attempt to link it to the demand curve.

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

Discuss how a government's policies toward income and wealth distribution can affect a consumer's demand.

(b) A consideration of the impact of taxation, government transfer payments and/or other government policies on income and wealth and hence the budget line and demand. Consideration of the effect of taxation on wealth and the consumption effects of changes in wealth. Consideration of the difference in the income effect for normal and inferior goods.

L4 (9–13 marks): For a response that explains two policies and their impact on income and wealth linked to consumer demand for normal goods and inferior goods. (No conclusion maximum 11).

L3 (7–8 marks): For a response which explains two policies and the effect on income or wealth. Either normal or inferior goods are considered.

L2 (5–6 marks): For a response which explains one policy with limited reference to demand.

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

Question 3

9708/41/O/N/19/Q3

- (a) Explain what is meant by a consumer's equilibrium and how it is related to the demand for a product. [12]
- (b) Indifference curve analysis refers to income and substitution effects. Explain what these effects are and discuss whether they might be the major influence for a manufacturer intending to change the price of a product. [13]

MARK SCHEME

(a) Equilibrium is a relationship between the marginal utility and the price; can be explained using either marginal utility or indifference curves – marginal rate of substitution equal to the price ratio. Consideration of the assumptions: rationality, sovereignty, the ability to measure utility, the relationship between utility and price. Link between price and demand.

L4 (9–12 marks): For a clear explanation and a sound comment on the relationship between the price and the satisfaction obtained, referring to more than one good. Clear comment on the assumptions. Link to demand.

L3 (7–8 marks): For a less developed answer but one that still refers to the equilibrium but probably concentrates on only one good. Weaker consideration of the assumptions or omission of link to demand.

L2 (5–6 marks): For a brief attempt which does not clearly bring out the significance of the marginal analysis or which does not deal with any of the assumptions.

- L1 (1–4 marks):** For an answer that has some basic correct facts but includes irrelevancies and errors of theory.
- (b)** Analysis of the difference between income and substitution effects and the overall effect on demand of a change in price. Whether demand will increase, and by how much for a price fall depends on the classification of the good but also on the price elasticity of demand. The company would also need to know if it increased production how that would affect costs – and thus profits.
- L4 (9–13 marks)** For a clear explanation of the analysis – income, substitution; a comment on the effect on demand; and a comment on the relation to revenue via elasticity. Good reasoned structure.
- L3 (7–8 marks):** For a less developed analysis of the income and substitution effects, or of the link to demand, or a weaker link to the revenue. Two aspects done reasonable well, or three less developed.
- L2 (5–6 marks):** For an answer that either deals with one aspect well, or two with less clarity.
- L1 (1–4 marks):** For an answer that has some basic correct facts but includes irrelevancies and errors of theory.

Question 4**9708/42/M/J/19/Q4**

- (a) (Analyse how an individual consumer's demand curve for a product is derived and consider how this may be linked to its market demand. [12]**
- (b) Use indifference curve analysis to distinguish between the effect of an increase in income on a consumer's demand for a normal good and an inferior good. [13]**

MARK SCHEME

(a) Candidates can use either a marginal utility or an indifference curve approach. Marginal Utility: explanation of marginal and total utility, the equi-marginal equilibrium, the change in price of one good and the resultant establishment of the new equilibrium and its consequence for demand. Indifference Curve: explanation of the shape of an indifference curve and a budget line, the point of tangency to establish demand, followed by a change in price and change in quantity, linked to an individual's demand curve. The aggregation of individual's demand curves to make the market demand curve.

L4 (9–12 marks) For a sound explanation of marginal utility, and the link to equi-marginal equilibrium. The effect of a change in price on demand for a good linked to an individual demand curve and hence the aggregation of individual demand to construct a market demand curve.

Or

(b) For an accurate analysis of an indifference curve map and budget line tangency. Change in price shifting budget line and impact on individual demand curve and hence the aggregation of individual demand to construct a market demand curve.

L3 (7–8 marks) For a sound explanation of marginal utility, and the link to equimarginal equilibrium. The effect of a change in price on individual demand.

Or For an accurate analysis of an indifference curve map and budget line tangency. Change in price shifting budget line and impact on individual demand curve.

L2 (5–6 marks) For a limited explanation of equilibrium.

Or

For an explanation of an indifference curve map and budget line tangency.

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

Use indifference curve analysis to distinguish between the effect of an increase in income on a consumer's demand for a normal good and an inferior good.

Analysis to show the effect of an outward shift in the budget line on the demand for a normal (positive) good and inferior (negative) good.

L4 (9–13 marks) For a thorough analysis of the effect of an increase in income on both normal and inferior goods.

- L3 (7–8 marks)** For a thorough analysis of the effect of an increase in income on **either** a normal **or** an inferior good. (This may be shown indirectly through a change in real income following a price fall.)
- L2 (5–6 marks)** For an explanation of a normal good and an inferior good with some link to indifference curves.
- L1 (1–4 marks)** For an answer which has some basic correct facts but includes irrelevancies. Errors of theory or omissions of analysis will be substantial.

Question 5**9708/42/F/M/19/Q3**

- (a) Explain why indifference curves are usually drawn convex to the origin, are downward sloping and do not cross each other. [12]
- (b) Consider, for an inferior good, the relationship between indifference curves, budget lines, price changes and demand curves. [13]

MARK SCHEME

- (a) Explanation of diminishing marginal utility, and how more of a good is preferred to less of a good so the curves cannot cross; they have an 'indifferent' response along them representing a constant level of utility.
- L4 (9–12 marks):** for a clear analysis of ICs and all three parts of the question.
- L3 (7–8 marks):** for a less competent explanation of at least two of the parts of the question or a weaker explanation of all three parts.
- L2 (5–6 marks):** for a competent explanation of one part or a weak explanation of two elements of the question.
- L1 (1–4 marks):** for an answer that has some basic correct facts but includes irrelevancies and errors of theory.
- (b) Theory states that consumers maximise satisfaction and determine demand by relating utility to price; this is shown by indifference curves and budget lines. Income changes shift budget lines parallel, price change of one good cause budget line to pivot. Equilibrium is changed – the extent and direction depending on the type of good. Explanation of income and substitution effects for an inferior good.
- L4 (9–13 marks):** for a clear explanation of the links and correct analysis of income and substitution effects of price change.
- L3 (7–8 marks):** for a briefer explanation; no clear link to the demand curve, or link to demand but some confusion over income and substitution.
- L2 (5–6 marks):** for a poor explanation of the terms or a weak comment on the links.
- L1 (1–4 marks):** for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

2018**Question 1****9708/43/O/N/18/Q2**

A city bus company proposes to reduce passenger fares. Explain whether consumers always buy more of a good at a lower price than a higher price. Consider what might be the effect on demand for bus journeys and the revenue of the bus company of the lower fares. [25]

MARK SCHEME

Explanation of change in demand caused by lower price; mention of income and substitution effects and the difference between normal, inferior and Giffen goods. Revenue change will depend partly on the type of good and partly on the price elasticity of demand. Revenue will increase with a normal good with elastic demand. Bus journeys used to be classified as inferior goods but candidates could debate whether that is still the case. Increasingly, they are preferred to travel by car because of congestion and parking charges.

L4 (18–25 marks): for a clear explanation of different types of good, of income and substitution effect and of the possible changes on revenue depending on the price elasticity of demand, and a comment on the likely elasticity of bus travel.

L3 (14–17 marks): for a more limited explanation of different types of good, with weaker distinctions between income and substitution effects. A comment should be provided on elasticity but the particular link to bus travel will probably be omitted.

L2 (10–13 marks): for a brief explanation but with no distinction between income and substitution effect, no link to bus travel in particular and a general comment on price elasticity of demand.

L1 (1–9 marks): for an answer that has some basic correct facts but includes irrelevancies and errors of theory.

Question 2

9708/41/O/N/18/Q3

(a) Explain what is meant by consumer equilibrium and consider whether the assumptions underlying consumer equilibrium are realistic. [12]

(b) Analyse the differences between a normal good, an inferior good and a Giffen good. Discuss whether knowledge of these differences is all that is required by a company considering changing the price of its product. [13]

MARK SCHEME

(a) Equilibrium is a relation between the marginal utility and the price. Can be explained using either marginal utility or indifference curves – marginal rate of substitution equal to the price ratio. Consideration of the assumptions rationality, sovereignty, the ability to measure utility, the relation between utility and price.

L4 (9–12 marks): for a clear explanation and a sound comment on the relation between the price and the satisfaction obtained, referring to more than one good. Clear comment on the assumptions.

L3 (7–8 marks): for a less developed answer but which still refers to the equilibrium but probably concentrates on only one good. Weaker consideration of the assumptions.

L2 (5–6 marks): for a brief attempt which does not clearly bring out the significance of the marginal analysis or which does not deal with any of the assumptions.

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

(b) Analysis of the difference between income and substitution effects and the overall effect on demand of a change in price. Whether demand will increase, and by how much for a price fall depends on the classification of the good but also on the price elasticity of demand. The company would also need to know if it increased production how that would affect costs – and thus profits.

L4 (9–13 marks): there are three aspects to the question: a clear explanation of the analysis – income, substitution; a comment on the effect on demand and a comment on the relation to revenue via elasticity. Good reasoned structure.

L3 (7–8 marks): for a less developed analysis of the income substitution effects, or of the link to demand, or a weaker link to the revenue. Two aspects done reasonable well, or three less developed.

L2 (5–6 marks): for an answer that either deals with one aspect well, or two with less clarity.

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

Question 3

9708/43/M/J/18/Q2a

Explain why the concept of the margin is significant in the economic theory of consumer behaviour. [12]

MARK SCHEME

Margin is significant in relating the utility/satisfaction to the price in determining equilibrium quantity bought. Candidates can use either marginal utility theory or marginal changes on indifference curves related to budget lines.

L4 (9–12): for a clear explanation and a sound comment on the relation between the price and the satisfaction obtained, referring to more than one good

L3 (7–8): for a less developed answer but which still refers to the equilibrium but probably concentrates on only one good

L2 (5–6): for a brief attempt which does not clearly bring out the significance of the marginal analysis

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

Question 4

9708/42/M/J/18/Q2

(a) Explain, with the aid of a diagram, diminishing marginal utility and its link to indifference curves. [12]

(b) Discuss, using indifference curve analysis, how the impact of an increase in indirect taxation on the quantity demanded of a good depends on whether it is a normal or inferior good. [13]

MARK SCHEME

(a) The marginal rate of substitution between two goods is the 'linking' concept. Explanation of utility theory and indifference curves. Because of diminishing marginal utility, the MRS is not constant and this explains the shape of the indifference curve.

L4 (9–12 marks) For a reasoned and clear explanation of the concepts together with diagrams to illustrate them. Explicit reference to the linkage required.

L3 (7–8 marks) For a competent comment but with a limited elaboration of the two concepts, or a reasoned and clear explanation of one concept and limited mention of the other.

L2 (5–6 marks) For a superficial explanation concentrating on general concepts with only limited relevant reference to the question.

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

(b) Indirect tax increases the relative price of a good and there will be both income and substitution effects. These must be shown using indifference curves. Discussion of relative size of income and substitution effects for normal and inferior goods.

L4 (9–13 marks) For a thorough explanation of the impact of the indirect tax on both types of good together with relevant diagrams. A discussion on the substitution and income effects of the tax increase. Maximum 11 if no conclusion.

L3 (7–8 marks) For a competent explanation which does not fully analyse both types of goods. Full analysis of one type and limited analysis of the other.

L2 (5–6 marks) For an accurate though undeveloped comment concentrating on only one type of good.

L1 (1–4 marks) For an answer which shows some knowledge but does not indicate that the question has been fully grasped. The answer will have some correct facts but include irrelevancies. Errors of theory or omissions of analysis will be substantial.

Question 5

9708/42/F/M/18/Q2

The UK Government has established a behavioural insight team known as the 'nudge unit,' which attempts to change consumer behaviour by persuasion.

Explain how indifference curve theory predicts a consumer will react to changes in income and changes in the price of a product in order to maximise satisfaction. Consider whether the use of 'nudge' theory (persuasion) conflicts with this theory of maximising satisfaction. [25]

MARK SCHEME

Theory states that consumers maximise satisfaction by relating utility to price; this is shown by indifference curves and budget lines. Income changes shift budget lines parallel; price change of one good causes a budget line to pivot. Equilibrium is changed – the extent and direction depending on the type of good. Nudge theory seeks to persuade. It could be represented by a change in perceptions or taste shown by the shape of the indifference curve. It does not invalidate the notion of equilibrium and maximising satisfaction according to the new shape of the curve.

L4 (18–25) for a clear analysis of ICs and an explanation of income and price changes, a link between nudge theory and with a concluding paragraph.

L3 (14–17) for a clear analysis of either price or income changes or a weaker analysis of both but still with an attempt to consider the link to nudge theory, although not so conclusively.

L2 (10–13) for a less developed analysis of the IC theory and a poor attempt at discussing the persuasive effect of nudge theory on the shape of the curve.

L1 (1–9) for an answer that has some basic correct facts but includes irrelevancies and errors of theory

2017**Question 1**

9708/43/O/N/17/Q2

(a) Explain why an identical price fall would result in a different demand curve for a normal good from that for an inferior good. Use indifference curve analysis to support your answer. [12]

(b) The only criticism of demand theory is that the consumer is not rational.' Consider whether you agree with this statement. [13]

MARK SCHEME

(a) Explanation of indifference curves, description of normal good, (positive substitution, positive income) inferior, (negative income does not outweigh positive substitution for price fall) Link to demand curve, showing possible different slope of curve and different price elasticity.

L4 for a reasoned answer with a conclusion illustrating all the points, shape of curve, equilibrium, construction of demand, change in price, change in demand, 9–12

L3 for a competent answer that deals with part of the analysis, probably only briefly linking equilibrium to demand curve 7–8

L2 for a less developed answer probably the demand curve link, or mention of elasticity 5–6

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

(b) Discussion of consumer theory; is it likely that consumers behave irrationally, is it possible to construct indifference curves, calculate marginal utility, elasticity, price equilibrium.

L4 for a sound discussion and comment with good illustrations and a clear understanding of the principles involved. 10 max no conclusion. 9–13

L3 for a competent but less developed discussion idea of rationality or a more limited debate about the realism of the demands of the theory. 7–8

L2 for a correct but undeveloped explanation with some attempt at analysis but only brief discussion with no conclusion. 5–6

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

Question 2

9708/42/O/N/17/Q3

- (a) Analyse how indifference curve theory explains why a consumer will normally buy more of a good at a lower price than at a higher price. [12]
- (b) Discuss why there might be exceptions to this normal response, distinguishing the income effect from the substitution effect. Consider the relevance of these exceptions to firms and the government. [13]

MARK SCHEME

- (a) Explanation of indifference curves, equilibrium point, b) link between indifference curves and demand curve c) discussion of how reduced price can affect equilibrium/demand for a normal product, shift of budget line.

L4 for a reasoned answer with a conclusion illustrating all the points, shape of curve, equilibrium, construction of demand curve, change in price, change in demand, 9–12

L3 for a competent answer that deals with part of the analysis, probably only briefly linking equilibrium to demand. 7–8

L2 for a less developed answer referring to indifference curves and budget lines. 5–6

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

- (b) Discussion of inferior, (negative income does not outweigh positive substitution for price fall) Giffen goods, (negative income outweighs positive substitution for price fall). Effect on likely revenue to the firm, on tax revenues to government, relevance of price, income elasticity.

L4 for a sound explanation and discussion with good illustrations and a clear understanding of the principles involved with accurate links and a reasoned evaluation referring to firms and government.. 9–13

L3 for a competent explanation of the terms with accurate but limited discussion with some analysis of the links. 7–8

L2 for a correct but undeveloped explanation with some attempt at analysis but only brief discussion. 5–6

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

Question 3

9708/41/O/N/17/Q3

- Use indifference curves to distinguish between the income and substitution effects of a price change. Discuss whether the distinction might be important for a manufacturer. [25]

MARK SCHEME

Explanation of indifference curves, income, substitution of a price change. These can then be related to a demand curve to show the effect on demand of a price change and determine the possible change in revenue, and maybe profits, depending on the type of good.

L4 for a reasoned and clear discussion, logically presented dealing with income, substitution, link to the demand curve, and clear link to importance for manufacturers. Maximum 21 with no conclusion. 18–25

L3 for a fair but undeveloped discussion probably concentrating on income, substitution effects without a clear link to demand, or without a clear analysis of the possible effect on manufacturer's revenue through elasticity. 14–17

L2 for a briefer comment on income/substitution, no link to demand, no pertinent comment on revenue/elasticity or normal/inferior goods 10–13

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

Question 4

9708/43/M/J/17/Q3

- (a) Explain how utility theory can be used to determine the downward slope of a demand curve. [12]
- (b) Discuss, using indifference curve analysis, why a decrease in a sales tax on all goods and services might have a different impact on demand for a normal good than for an inferior good. [13]

MARK SCHEME

- (a) Explanation of utility, assumption of given tastes, income, relation to price, equilibrium point and quantity purchased, result of changes in price to construct demand curve.

Level 4 (9–12 marks): for a reasoned and clear explanation, logically presented dealing with each point and an accurate explanation of the derivation of the curve.

Level 3 (7–8 marks): for a fair but undeveloped explanation probably concentrating on the equilibrium condition but not fully explaining the shape of the whole curve.

Level 2 (5–6 marks): for a briefer explanation, probably not fully explaining the equilibrium and with a link to only one point on the curve.

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

- (b) Decrease in sales tax lowers price, shifts budget line. As the tax applies to all goods the budget line will shift outwards, not necessarily parallel. Reward a discussion of a reduction in tax/price on one good.

Level 4 (9–13 marks): for a reasoned and clear discussion, logically presented dealing fully with effect on demand for inferior and normal good. An inferior good that is also a Giffen good will result in a fall in demand. Clear conclusion.

Level 3 (7–8 marks): for a fair but undeveloped discussion with probably some confusion over inferior good. Inferior good may result in a fall in demand if it is a Giffen good, but not otherwise.

Level 2 (5–6 marks): for a briefer discussion with some inaccuracies.

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

Question 5

9708/42/M/J/17/Q2

Choice is an essential part of economics. Sometimes consumers change their choices either when shops have special offers on previously very expensive luxury products, or when advertising persuades them to change their preferences.

Analyse how the economic theory of indifference curves can be used to construct a consumer's demand curve. Discuss whether this theory can explain the above changes in choice. [25]

MARK SCHEME

- (i) Explanation of indifference curves, equilibrium point, (ii) link between indifference curves and demand curve, (iii) discussion of how reduced price can affect equilibrium/demand for a luxury product, shift of budget line, income substitution effects, (iv) advertising, change in tastes would change the shape of the indifference curve.

Level 4 (18–25 marks): for an answer illustrating all the 4 elements of the question, equilibrium, construction of a demand curve, change in demand, and change in shape of indifference curve and a conclusion. No conclusion max. 22, 18–19 marks if 3 elements well done with a conclusion.

Level 3 (14–17 marks): for a less developed answer that deals with 3 points.

Level 2 (10–13 marks): for a limited answer that deals with only 2 points.

Level 1 (1–9 marks): for an answer that shows some knowledge but does not indicate that the question has been fully grasped or where the answer is mostly irrelevant.

Question 6

9708/41/M/J/17/Q2

- (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]

MARK SCHEME

- (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.

Question 1

9708/42/0F/M /17/Q3

- (a) Explain what is meant in economic theory by consumer equilibrium. [12]
- (b) Discuss the conditions that would cause the demand for a good to (i) increase and (ii) fall as a result of a fall in the price of the good. Use indifference curve analysis to support your answer. [13]

MARK SCHEME

- (a) Explanation of utility, assumption of given tastes, income, condition of equilibrium for one product, and for a number of products with different prices. Alternatively the equilibrium can be explained with indifference curves.

L4 For a clear explanation, logically presented dealing with each point. **9–12**

L3 For a fair but undeveloped explanation either dealing with a single product or dealing with a number of products but not explaining the equation properly. With indifference curves the reasons for the slopes of the curves will probably not be given. **7–8**

L2 For a briefer explanation, probably not fully explaining the equilibrium in relation to price, or not explaining more than one product. Or with indifference curves just baldly mentioning the tangent without an explanation. **5–6**

- L1 For an answer that has some basic correct facts but includes irrelevancies and errors of theory
1–4
- (b) Giffen goods would result in a different outcome when prices change from the outcome of a normal good. Indifference theory can show more precisely why the difference occurs using income and substitution effects. Normal good, substitution increases demand, income increases demand, overall increase. Giffen good, substitution increases, income decreases to a greater extent, overall decrease in demand.
- L4 For a reasoned and clear discussion, logically presented dealing with income, substitution, normal, Giffen. 9–13
- L3 For a fair but undeveloped discussion probably with correct normal good but errors on Giffen good. 7–8
- L2 For a briefer discussion with minor errors either in income/substitution or in Giffen good. 5–6
- L1 For an answer that has some basic correct facts but includes irrelevancies and errors of theory.
1–4

Question 2

9708/42/O/N/16/Q3

The use of indifference curves to establish a consumer's equilibrium is purely a theoretical tool. They show the relation between two goods; they do not show prices or income and, therefore, cannot be used to determine a demand curve.

How far do you agree with this statement?

[25]

MARK SCHEME

Explanation of the characteristics of both markets in terms of price determination, profit levels, branding, size, barriers to entry. [12]

L4 For a sound explanation of the analysis and a clear understanding mentioning at least four comparisons. [9–12]

L3 For a competent comment but with limited development of the analysis or a fuller analysis of three comparisons. [7–8]

L2 For a brief explanation of the characteristics and a weak comment or a fuller explanation of only two comparisons. [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]

Question 3

9708/42/O/N/16/Q3

(a) **A number of consumers are deciding whether to buy a product. How far does economic theory explain the determination of the market demand curve for that product?** [12]

(b) **Discuss whether that theory is still valid if the producer decides to advertise the product, and consider the effects of the advertising on the demand curve for the product.** [13]

MARK SCHEME

(a) **Explanation of DMU and its link to equilibrium price and through changes in price to the demand curve for the individual. Accept Indifference Curve analysis. Market demand is derived from summation of individual demand curves.** [12]

L4 For a sound explanation of the analysis and a clear understanding of the link to individual and then market demand. Need to provide some evaluative comment for L4.

[9–12] (max10 no ref to Market Demand)

L3 For a competent comment but with limited development of the analysis, maybe with weak link to the market demand, or weak link between utility and demand. [7–8]

L2 For a brief explanation of utility but no link between DMU, changes in price and hence the demand curve. [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]

(b) **Advertising would alter the demand curve in two possible ways. It could cause an increase in the quantity demanded, represented by a shift of the curve outwards to the right. Also, it**

might make the demand for the product more inelastic. This would change the shape of the demand curve. The theory of diminishing utility is still valid. [13]

- L4** For a sound discussion with good explanation of the analysis and a clear understanding of how advertising can both change the shape of the demand curve and also the shift of the demand curve, with a conclusion. [9–13] (max 11 no conclusion)
- L3** For a competent comment but with limited development of the analysis of both or deals with only one. [7–8]
- L2** For a brief explanation and with a weak explanatory link between advertising and the demand curve. [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]

Question 4

9708/41/O/N/16/Q2

- (a) Explain the meaning of an indifference curve and show to what extent indifference curves can be used to determine a consumer's demand curve for a product.** [12]
- (b) Consider whether indifference curves can be used to analyse the effects of a fall in the price of a good on the demand for both a normal good and a Giffen good.** [13]

MARK SCHEME

- (a)** Explanation of the construction of an indifference curve and determination of equilibrium with given income and given prices using budget lines. Derivation of a point on the demand curve from the equilibrium point. [12]
- L4** For a sound explanation of indifference curves and a clear link to the demand curve with accurate clear diagrams 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 omitting a clear link to the demand curve, or with minor errors in the analysis or in the diagrams [7–8]
- L2** For a briefer explanation of indifference curves and equilibrium position but with no link to the demand curve; or with inaccurate diagrams and weak explanation. [5–6]
- L1** For an answer which has some basic correct facts but includes irrelevancies and errors of theory [1–4]
- (b)** A price fall is reflected in a change in the budget line (pivot from point on axis of 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 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, and greater than, the substitution effect for the Giffen good. [13]
- L4** For a reasoned and clear discussion, logically presented dealing with income, substitution, normal, Giffen and linked to demand. [9–13]
- L3** For a fair but undeveloped discussion probably concentrating on income, substitution without mentioning different types of goods with either a brief comment about the individual demand curve or no discussion about the demand curve [7–8]
- L2** For a limited explanation with a lack of development of both income/substitution and normal/Giffen goods [5–6]
- L1** For an answer which has some basic correct facts but includes irrelevancies and errors of theory [1–4]

Question 5

9708/43/M/J/16/Q2

- (a) Economists write about indifference analysis when studying consumer choice. Does this theory of consumer behaviour mean that a consumer is always indifferent when choosing between two products? [12]
- (b) Discuss whether the use of a demand curve and budget lines are similar in the way they represent what will happen if the price of a good falls. [13]

MARK SCHEME

- (a) Explanation of meaning of indifference with reference to extra utility lost/gained. Principle of diminishing marginal utility. Analysis of comparison of one indifference curve with another; and also comparison of utility with price. [12]

L4 (9–12) For a reasoned analysis dealing with the shape of curve, different curves and link to the price
L3 (7–8) For a fair analysis but undeveloped answer but still with a conclusion

L2 (6–6) For a limited attempt which does not clearly determine the link between two curves of the importance of marginal utility

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

- (b) Both can be used to derive the change in consumer purchases; however, demand has price and quantity of one good bought, budget lines have quantities of two goods—price is not on the axis; cannot tell how demand will change with budget line unless also show preference lines and then need to link that to another diagram.

Indifference curves have a greater possibility of showing income and substitution effects and thus are more able to distinguish between normal, inferior and Giffen goods. [13]

L4 (9–13) For a sound discussion indicating the similarities/differences

L3 (7–8) For an accurate explanation but with a less clear comparison/discussion

L2 (6–6) For a general undeveloped discussion with little comparison.

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

Question 6

9708/42/M/J/16/Q3

With the help of diagrams, use indifference analysis to:

- (a) Explain what is meant in economic theory by consumer equilibrium and how it is related to a consumer's demand curve. [12]
- (b) Discuss how this equilibrium might be affected by a government fiscal policy that raises taxes on goods. [13]

MARK SCHEME

Explanation of consumer equilibrium, using indifference curves and budget lines, as point of maximum satisfaction with given income and given prices. Derivation of a point on the demand curve from the equilibrium point. The rest of the demand curve is only obtained by a change in the equilibrium. [12]

L4 (9–12) For a sound explanation of both budget lines and indifference curves and a clear link to the demand curve with accurate clear diagrams and a clear understanding of the principles involved.

L3 (7–8) For an accurate reference to the question but with a more limited explanation, includes a link to the demand curve, or with minor errors in the analysis or in the diagrams.

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

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

Taxes on goods would be likely to raise the price. A price rise of one or more goods is reflected in a change in the budget line (pivot from point on axis of 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 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 as the substitution effect for the inferior good. Candidates may analyse the effect of tax changes on the price of two goods. [13]

L4 (9–13) For a reasoned and clear discussion, logically presented dealing with income, substitution effects, normal, inferior goods.

L3 (7–8) For a fair but undeveloped discussion probably concentrating on income, substitution effects without mentioning different types of goods or vv with either a brief comment about the individual demand curve or no discussion about the market demand curve.

L2 (5–6) For a limited discussion with a lack of development of both income/substitution and normal/inferior goods.

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

Question 7

9708/41/M/J/16/Q3

(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]

MARK SCHEME

(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. [12]

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. [13]

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.

Question 8

9708/42/M/J/15/Q2a

Describe how consumer theory suggests a rise in income will cause a consumer's demand to change for a normal good and for an inferior good. [12]

MARK SCHEME

A rise in income will cause an increase in demand for a normal good; the extent of the increase will depend on the income elasticity and will vary between a necessary good and a luxury good. Rise in income will not cause a rise in demand for an inferior good but a switch away from the good.

L4 (9–12) For a sound description of the analysis and a clear understanding of the principles involved.

L3 (7–8) For a competent comment but with limited elaboration, probably of elasticity, and description of how equilibrium is achieved.