INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2011 examinations

Subject CT7 — Business Economics
Core Technical

Introduction

The attached subject report has been written by the Principal Examiner with the aim of helping candidates. The questions and comments are based around Core Reading as the interpretation of the syllabus to which the examiners are working. They have however given credit for any alternative approach or interpretation which they consider to be reasonable.

T J Birse
Chairman of the Board of Examiners

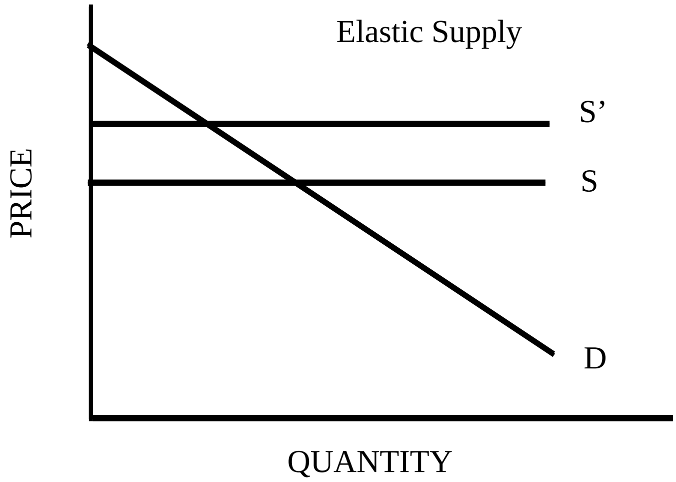
July 2011

1	C
2	B
3	B
4	A
5	D
6	B
7	A
8	B
9	C
10	D
11	A
12	A
13	A
14	D
15	B
16	D
17	B
18	B
19	B
20	C
21	D
22	B
23	D
24	A
25	C
26	B

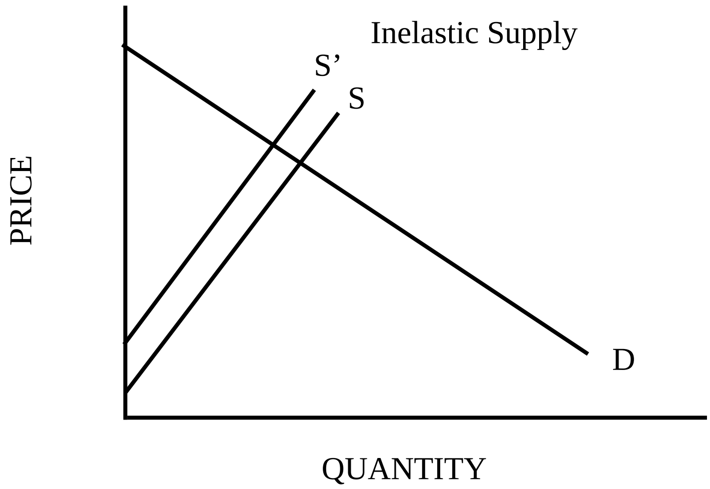
Examiner comment

This part of the paper was generally well answered although questions 6, 14, 23 and 25 tended to have the poorest successful response rate.

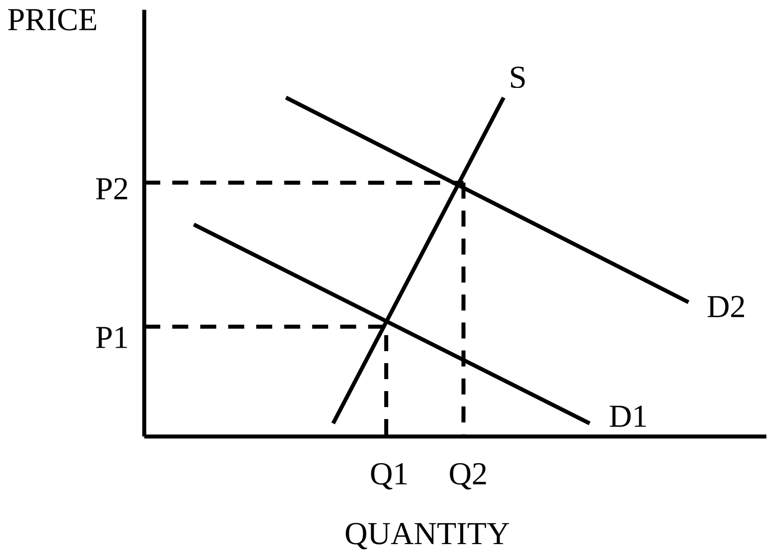
27 (i) The first diagram illustrates the case of a perfectly elastic supply curve S and a downward sloping demand curve D. Here the introduction of a tax shifts the supply curve upwards from S to S', and all the tax is passed on to the consumer.



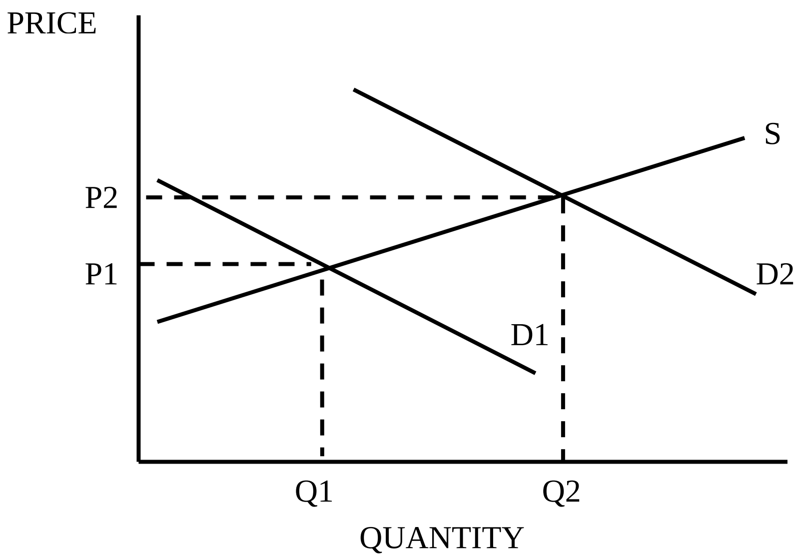
In the second diagram, the supply curve is relatively inelastic. Here the introduction of the tax shifts the supply curve from S to S', but the price rises by less than the tax (the vertical difference between S and S'). Hence some of the tax has been absorbed in the firm's cost. Areas between the supply and demand curves can be used to indicate the exact distribution of the burden of the tax between consumers and producers.



(ii) The diagram below illustrates the effect of a significant increase in demand from D_1 to D_2 on expected market price and sales, when the business has an inelastic supply. Price will rise significantly from P_1 to P_2 hence total revenue should rise and subject to costs remaining constant, overall profitability should increase.



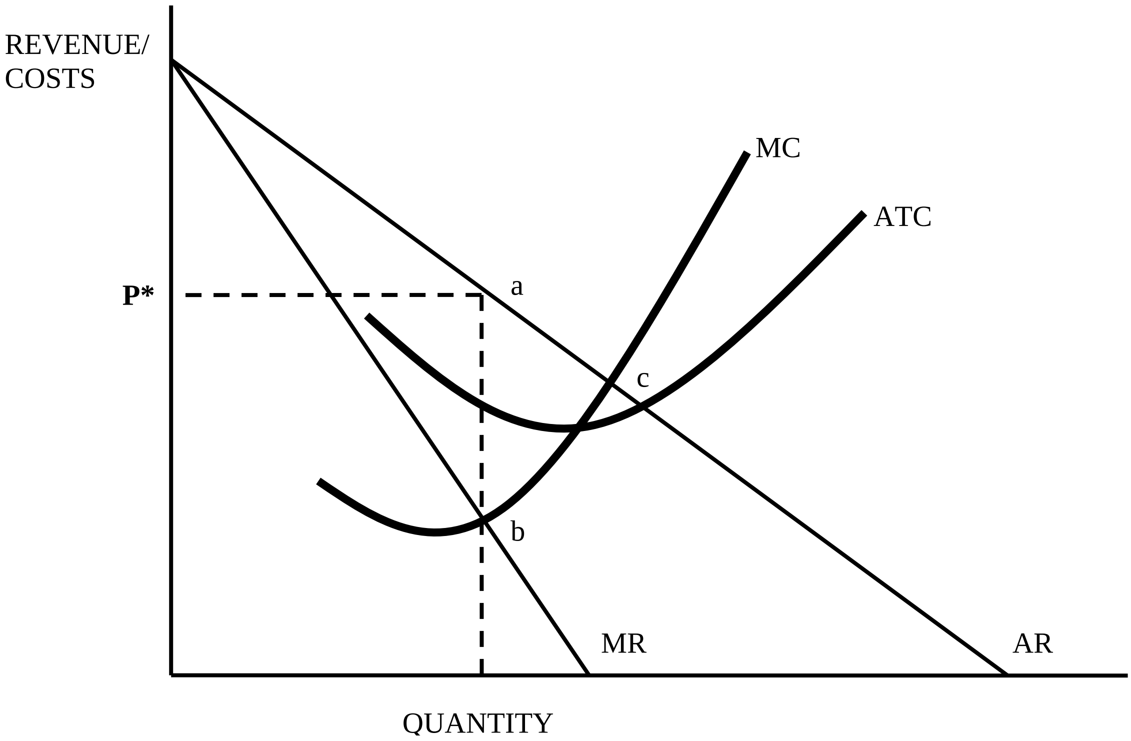
When the business has an elastic supply, as shown below, the market price will not rise significantly but there is likely to be a significant increase in sales. Total revenue will rise in this situation and also profits should rise because the business can expand supply to meet the extra demand without incurring significant increases in unit costs.



Examiner comment

Part (i) of this question was not answered well. Candidates often did not show the effect of varying the slope of the supply curve on the amount of the price rise. It was expected that candidates should make it clear that there would be a smaller increase in price when the supply curve is less elastic. Part (ii) was generally answered well.

28 (i)



(ii) (a) Area abc = deadweight welfare loss.

(b) Socially efficient level of output will be attained when the firm operates at a level of output where **AR = MC.** We assume that the monopolist is a profit maximiser, hence it will operate at an output where **MR = MC.** At this level of output the monopolist would set the price at P* which would not be equal to the marginal cost, therefore socially efficient output would not be achieved.

Examiner comment

This question was generally answered well but many candidates failed to discuss adequately the socially efficient output at point c.

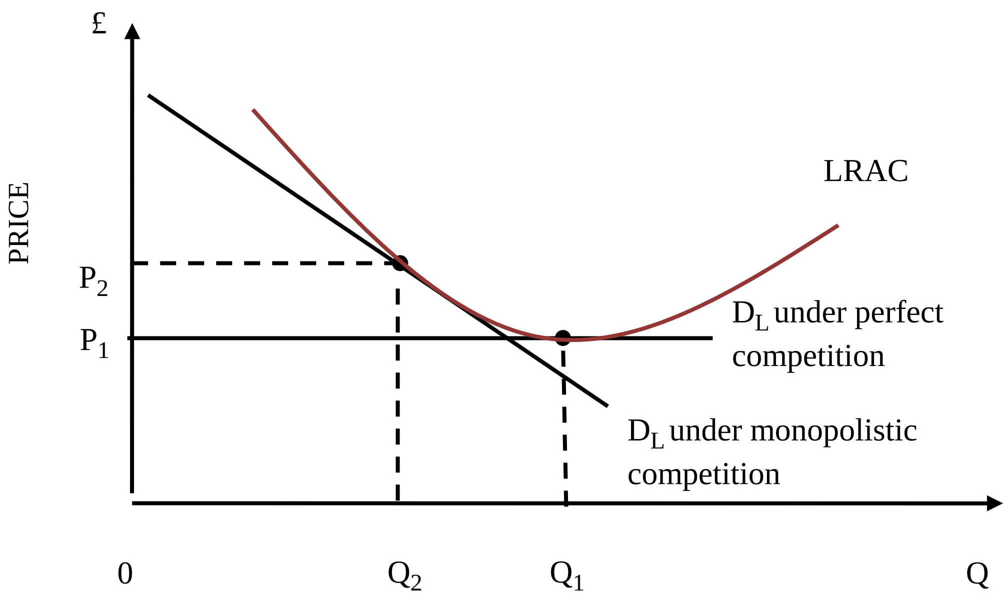
29 (i) The law of diminishing marginal returns is an attempt to explain why the marginal and average total costs of a firm will eventually begin to rise. The law will only apply in the short run that is that time period where at least one factor of production will be fixed. The law states that if an increasing amount of a variable factor of production is combined with a fixed factor, then eventually the marginal product of the variable factor will fall. This will cause both the marginal and average total cost of production to rise.

(ii) Diseconomies of scale represent an attempt to explain why the long run average cost of production of a firm will eventually begin to rise. The long run is that time period where it is possible to vary all the factors of production. When the total percentage increase in output is less than each of the factors of production, this will cause unit costs to rise. This can be shown by an upward movement along the long run average total cost curve.

Examiner comment

This question was generally answered very well and many candidates achieved full marks.

30 (i) Long-run equilibrium of the firm under perfect and monopolistic competition



(ii) In the long run, firms operating under monopolistic competition will produce at an output below their minimum cost point. This is known as excess capacity and would be shown on the diagram as **Q1 – Q2**.

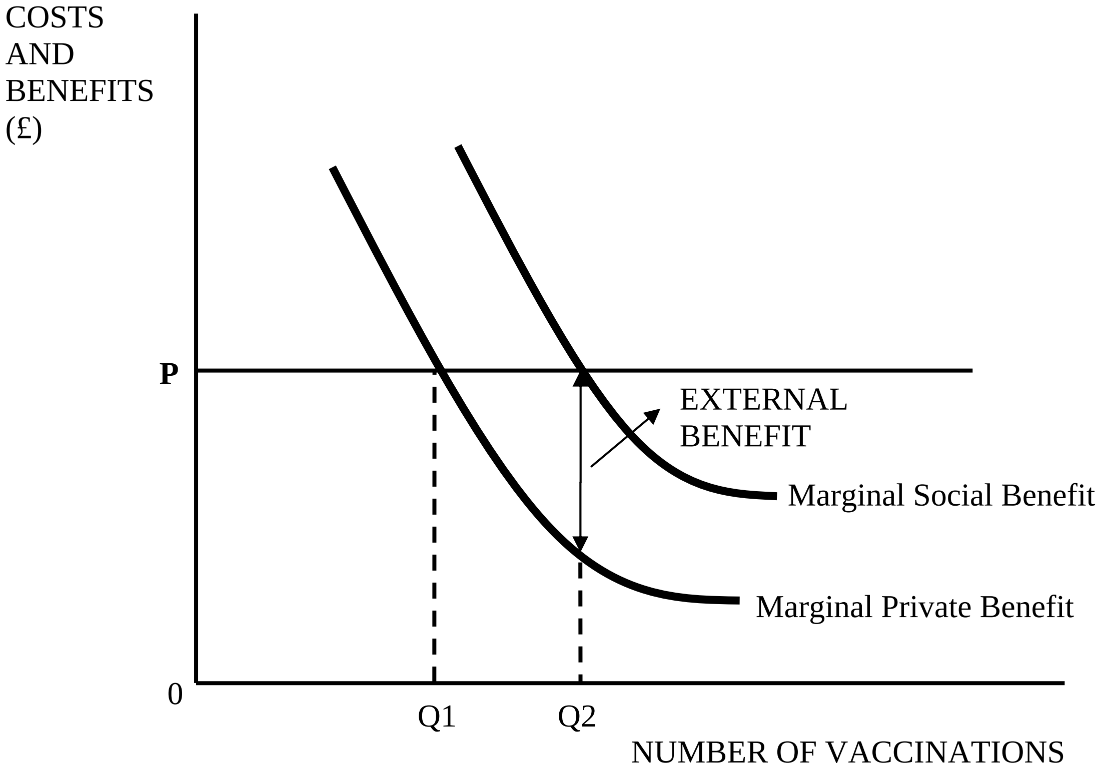
(iii) Under monopolistic competition, although firms may charge a higher price than under perfect competition, the difference may be very small. As there are a large number of substitutes, the demand curve for the firm under monopolistic competition is likely to be highly elastic. Also consumers could benefit by having a greater variety of products to choose from.

Examiner comment

This question was answered well by the majority of the candidates. However, some students did not include in their answer to part (iii) the importance of greater product variety for consumers.

31 (i) An external benefit from consumption is the benefit experienced by people **other** than the consumer. Examples might include: vaccinations, education, health care.

(ii)



Examiner comment

This question was answered very well and many candidates obtained full marks.

32 (i) Gross Value Added at basic prices = Gross Domestic Product at market prices – taxes + subsidies

(ii) Gross National Income at market prices = Gross Domestic Product at market prices + net income from abroad

(iii) Net National Income at market prices = Gross National Income at market prices – capital depreciation

(iv) Households' disposable income = Gross National Income at market prices – taxes paid by firms + subsidies received by firms – depreciation – undistributed profits – personal taxes + benefits

Examiner comment

The majority of the candidates answered parts (i)-(iii) of the question well. However some candidates did not include subsidies by firms and benefits to consumers in their answers to part (iv).

33 **Three of the following:**

- A medium of exchange which provides a means through which goods and services can be bought and sold.

- A store of value, which allows consumers and businesses to save and enable goods to be purchased in the future.

- A unit of account which allows the price of goods and services to be compared and allows the price mechanism to operate.

- A standard of deferred payment which facilitates the system of trade credit.

Examiner comment

This question was answered very well, and most candidates achieved full marks.

34 (i) Country B should specialise in bread production.

(ii) Country A would produce 20 units of wine and Country B would produce 32 units of bread.

(iii) An appropriate exchange rate would be 3 units of bread for 1 unit of wine.

Country B can exchange 12 units of bread for 4 units of wine. Country B will now have the same wine as before but now has 20 units of bread instead of 16.

Country A will gain 12 units of bread and lose 4 units of wine so it will now have 16 units of wine and 12 units of bread. Country A can now reallocate domestic resources and exchange 5 of its own units of wine for 10 of its own units of bread, therefore Country A can have 11 units of wine and 22 units of bread, 1 more unit of wine and 2 more units of bread than before.

Both countries have therefore benefited through specialisation and trade.

Examiner comment

The above solution is appropriate in parts (ii) and (iii) if it is assumed that both countries devote ½ their resources to producing each product. However, this was not clearly specified in the question. Therefore, in awarding marks, examiners allowed for a range of plausible solutions and responses.

35 (i) A tariff is a tax charged on imported goods. A tariff will shift the supply curve for the good upwards by the amount of the tax.

A quota is a physical limit on the numbers or value of goods that can be imported into a country.

(ii) Any three of the following:

- to protect domestic employment
- to protect infant industries
- to protect against low cost overseas competition
- to protect against dumping
- to avoid the risks of over specialisation
- for strategic reasons
- to raise government revenue
- to correct a balance of payments deficit

Examiner comment

This question was generally answered well.

36 (i) Multiplier k = change in GDP/change in aggregate expenditure

$k = 360/120 = 3$
$k = 1/(1 - \text{mpc})$, mpc = 2/3

(ii) (a) If consumer confidence is high then they will tend to spend a higher proportion of their income so the mpc will be higher and the multiplier will increase.

(b) A increase in income tax rate will leave less income for households and lower the proportion of consumer expenditure on domestic goods which will reduce the multiplier.

Examiner comment

This question was generally answered well and many candidates obtained full marks.

37 There are a number of factors which might restrict the ability of a business to expand, including:

- Insufficient access to the necessary finance. Internal finance might be limited due to lack of profits available to plough back from the business – this is often related to the cyclical nature of business activity.

- Small and medium size enterprises do not have access to fund-raising through the issue of new shares.

- The nature of the existing market will also influence opportunities for growth. An expanding market is likely to generate sufficient profit to ensure that desired levels of investment can be maintained or increased. There may be market constraints due to the nature of the business's product/service. For example it is difficult for businesses in the hairdressing industry to significantly expand their market share, given the specific nature of the service provided.

- The existing management team might lack entrepreneurial vision or the necessary organisational skills.

- Diseconomies of scale may operate at relatively low levels of output.

Examiner comment

Many candidates offered a reasonable listing and a brief discussion of some of the factors that limit a firm's growth, but in many cases a more detailed discussion was required.

38 (i) Supply side policies can be divided up into market orientated supply side policies and interventionist supply side policies. Market orientated policies would include:

- A reduction in the size of the public sector and promotion of the private sector.

- Cuts in corporation and income tax to increase profit for further investment and to increase incentive in the labour market.

- Reducing welfare benefits to encourage more individuals to return to work.

- Deregulation and the introduction of policies to encourage competition.

- The introduction of new legislation to reduce the power of the trade unions and remove rigidities in the labour market.

- Provide investment grants to promote research and reduce regional imbalances.

- The introduction of new training schemes to encourage labour mobility.

- Encourage geographic mobility through the provision of better means of communication/new Job Centres.

Interventionist policies would include:

- Despite the trend towards privatisation, in many countries some key transport and power industries are government owned. Also the financial crisis of 2007–2009 has resulted in nationalisation of some financial institutions to ensure the stability of the financial system.

- Improvements in infrastructure such as motorways can directly benefit the industry.

- In most countries governments finance R&D in areas such as defence, aerospace, nuclear power industry and IT. In the UK a system of tax credits for expenditure by SMEs encourages R&D in these enterprises.

- Governments may set up training schemes or encourage educational institutions to provide vocational training courses. Alternatively, the governments can provide grants or tax relief to firms that provide training schemes.

- Providing advisory services, grants and tax concessions to small firms and imposing fewer planning and other controls on such firms.

- Governments can engage in discussions with firms and facilitate communication and discussion between firms to improve efficiency, encourage innovation, exchange information, coordinate decisions and create greater certainty.

- Governments may provide various information services to firms, such as technical assistance, the results of public research, information on markets etc.

(ii) The main aim of supply side policies is to increase an economy's potential output primarily by reducing market rigidities. In the labour market the aim would be to increase labour productivity and ensure that those who are able to work do become an active part of the workforce. Problems might arise in relation to the lack of mobility of the workforce and that labour supply for many jobs will be very inelastic. Also, prohibitive living expenses in some areas like the South East of England further reduces geographical mobility.

Plans to encourage business investment through cuts in corporation tax do not always achieve the desired objective; associated increases in profits sometimes result in an increase in shareholder dividend rather than in further capital investment.

Attempts to reduce trade union power can result in very costly industrial action which has a negative effect upon companies and the macro-economy.

Investment grants can be costly and have to be financed by further taxation or expenditure cuts, both of which might have negative effects on economic growth.

Deregulation can introduce new competition from overseas which might have a negative effect on domestic industry.

Government's attempts to improve the infrastructure will be costly and this is likely to have a negative effect on the government's financial planning

More privatisation may lead to a fall in the demand for labour and add to unemployment.

Examiner comment

Many candidates correctly identified the supply side policies in part (i). However, the answers to part (ii) often lacked sufficient depth to demonstrate the candidates' understanding of both the positive and negative effects of supply side policies. In addition, candidates were expected to discuss some of the problems associated with the implementation of supply side policies.

END OF EXAMINERS' REPORT