INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

September 2014 examinations

Subject CT7 – Business Economics
Core Technical

Introduction

The Examiners' Report is written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context at the date the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

F Layton
Chairman of the Board of Examiners

November 2014

General comments on Subject CT7

The Business Economics examination paper includes different types of questions requiring a variety of styles of answers in the degree of detail required. The questions clarify the amount of detail necessary in the answer.

For Multiple Choice questions, it is not necessary to show workings or to offer explanation. For questions requiring calculations with workings, full mark would only be awarded if workings are shown. Similarly, in questions requiring explanation, full mark will be awarded for providing adequate explanation. For essay questions, candidates are expected to include the relevant facts and issues *as well as* the linkages so that a direct and coherent answer to the specific question is provided. Thus, mere statement of facts and a general discussion of issues around the specific question will not be sufficient to gain a high mark. Where a question requires drawing diagrams and showing particular points or areas on the diagram, the diagram needs to be clearly drawn and correctly labelled and clear explanation offered.

Comments on the September 2014 paper

The paper was of a similar standard to the more recent years' papers which test the new syllabus. The new syllabus, first introduced in 2010, includes a discussion of many new topics relevant to the world of business and to the economy as a whole. The syllabus places a greater emphasis on, and provides a greater scope for testing the candidate's discursive and analytical as well as technical skills.

The standard of the performance in most questions in this diet was similar to the previous diets. Candidates were generally able to provide correct answers to parts of the questions where these involved offering standard numerical solutions and diagrams, or listing of the relevant factors (For example, question 34, 35 and 36 involved numerical calculations and performance on these questions was of a good standard). However, too often diagrams were found not to be fully and accurately labelled. Diagrams offered in part (iii) of question 37 were frequently incorrect.

Question 38 offered more scope for a wider discussion of policy and proved more challenging. Examiners were looking for a reasoned discussion of the need for the policy and a more extensive discussion of how it is implemented. Such discursive questions, especially where these relate to policy, tend to probe candidates' deeper understanding of the relevant issues and the linkages between these. A good mark could be obtained where an appreciation of the key issues, the linkages and the impact through the domestic but also possibly on aspects of the global economic system is demonstrated.

1	D	[1½]
2	D	[1½]
3	A	[1½]
4	A	[1½]
5	C	[1½]
6	C	[1½]
7	C	[1½]
8	C	[1½]
9	D	[1½]
10	C	[1½]
11	C	[1½]
12	D	[1½]
13	B	[1½]
14	D	[1½]
15	B	[1½]
16	B	[1½]
17	B	[1½]
18	D	[1½]
19	Mark awarded to all answers	[1½]
20	B (A also accepted)	[1½]
21	C	[1½]
22	D	[1½]
23	C	[1½]
24	D	[1½]
25	D	[1½]
26	D	[1½]

In question 19, under some circumstances all answers could be correct, so where any of the answers were offered, the candidate was awarded the mark.

In question 20, in some cases, answer A could also be correct, so the mark was awarded to candidates offering answers A or B.

The multiple choice questions were generally answered well.

27 Rational choice refers to the weighing up of costs and benefits of each alternative choice. For a consumer, the most rational choice is the option which gives the consumer the greatest benefit relative to cost. An example may be given in which a consumer has two choices of food. They will weigh up the costs and benefits of these two alternative products. For example, one may be highly enjoyable but is expensive and this is weighed up against a cheaper alternative which may not be as enjoyable. The answer may include a discussion of maximising utility/consumer surplus given constraints such as income. [3]

Many candidates did not provide an adequate explanation of what is meant by rational choice and few could explain how it applies to consumer decision making.

28 Laptops represent a normal good. Therefore, as income rises the demand for laptops will also increase. This is represented by a rightward shift in the demand curve; higher quantity traded and an increase in price. A fall in income, on the other hand, is expected to trigger changes in the opposite direction.

If consumers believe that the price of laptops will rise in future they will be induced to purchase laptops now rather than in the future. As a result of this, the demand curve will shift to the right as above. If however consumers believe that prices of laptops will fall in future (such as due to a sale) then consumers would postpone their purchases. In such a case, demand would shift left in the short term, representing a fall in price and quantity traded. [3]

This question was generally answered well.

29 Arguments for advertising: It provides consumers with information about goods and services, enables firms to enter into new markets where there are established brands and therefore effectively breaks down a potential barrier to entry (lower barriers to entry and therefore potential lower costs and increased consumer welfare), emphasises special features of the product to consumers and so aids product development, encourages price competition if price is a prominent feature of the advertising campaign, if sales increase, then there may be potential economies of scale to be gained in future.

Points which refer to subsidising other goods can be made. For example a company producing vitamins that advertises the benefits of a regular intake of its own brand of vitamins, will encourage consumers to buy vitamins in this and other brands. This free adverting for other vitamin producers results in an external benefit due to a healthier population. Advantages to the firm such as increased market share and more inelastic demand could also be considered.

Arguments against advertising: It aims to persuade people to buy the good but people may still not be fully informed and could be misled, advertising creates wants in a scare resource world and therefore can fuel human wants/materialism, resources directed towards advertising could be used elsewhere such as producing more goods, costs of advertising may be passed onto the consumer, can create a barrier to entry for new firms and thus reduce competition. Advertising may pose external costs to society. For example, advertising using billboards may spoil the landscape. [5]

Performance on this question was of variable quality; some candidates provided a reasonable list of points and others very few.

30 In both perfect competition and monopolistic competition firms tend to be characterised as small with little market power. Economies of scale is associated with falling costs per unit of production as production increases, which is generally associated with large scale firms. Under perfect and monopolistic competition, firms may find it very difficult to experience such cost advantages as specialisation and/or division of labour, by products, financial economies, efficiency of large machines and so forth. [3]

This question was generally answered well.

31 (a) Airline travel is potentially contestable for particular routes due to the existing firms in the market. In the industry, airlines often hold particular routes. The existing airlines would have already foregone the sunk costs of entry (planes) and therefore may experience relatively low entry costs to other routes. As a result of this, airline travel is potentially a contestable market. New firms entering the airline industry would experience high sunk costs and find it difficult to transfer capital outlays to another use. However, if an existing airline enters a particular route and it proves to be unsuccessful, they can withdraw from that route at a relatively low cost.

(b) Savings accounts will be operated by banks and building societies and represent a market which will have high barriers to entry. Firms investing in systems to operate savings accounts will not be able to switch the capital to other uses. Firms offering financial services may be able to offer savings accounts in addition to other financial products but, such a market will be relatively difficult to enter and is therefore weakly contestable.

(c) A firm providing all meals within a hospital may have a monopoly in the local area and be the sole provider of meals within the hospital. However, if the firm provides a poor service and/or uncompetitive pricing, then the hospital trust can seek out a new supplier. This market will be strongly contestable as others may enter the market with relative ease.

[6]

There were many good answers to this question although some candidates did not communicate an understanding of a contestable market, whilst others focussed on stating factors that would make a market contestable generally, without discussing the contestability of the case in hand.

32 Increasing economic growth may be associated with firms being able to make greater investment in plant and machinery, R&D and skills development and training. Such investments may lead to greater efficiency, greater productivity and increased profitability (due to reduced costs). In turn such improvements can lead to greater future potential growth. Moreover, in periods of economic downturn, firms are more likely to reduce their levels of investment. Firms will not be willing to make investments and produce more output if there is insufficient demand for it. Consequently, reductions in current investment will reduce potential growth. [3]

The answers to this question were disappointing with many candidates not offering higher investment in times of strong economic growth as a factor leading to future growth.

33 Unemployment benefits which are paid for by taxpayers, coupled with additional spending on public services to assist the unemployed.

Actual output is below potential output and therefore firms may not utilise all their resources to their full potential. This could represent a loss of profits.

Individuals experience a loss of earnings; this can be compensated partially by benefits. Individuals may also experience a decline in their health, loss of self-esteem and strained relationships with others. These represent loss of skills to the economy in long term and so loss of human capital.

The government experiences a fall in tax revenue as the unemployed do not pay income tax and buy fewer goods and services resulting in a decline in indirect taxes.

[3]

This question was generally answered well.

34 (i)

No of workers	*Total production*	*MPL*	*MRPL)*
0	–	–	–
1	25	25	5000
2	75	50	10000
3	127	52	10400
4	179	52	10400
5	212	33	6600
6	225	13	2600

[3]

(ii) TR = P * Q (200 * 179) = 35,800
TC = TFC + TVC
TC = 10000 + (5000 * 4)
TC = 30,000

Profit/Loss = TR – TC

5,800 = 35,800 – 30,000 (PROFIT)

[3]
[Total 6]

This question was answered particularly well with most candidates gaining a high mark. In part (i)(b) the marginal revenue product of labour was asked for. As this term is not covered in the syllabus, the relevant portion of the mark was awarded to all candidates.

35 (a) 25 + 20 + 16 = 61

(b) 5 * £10 = £50

(c) £2 = MU – P = £12 − £10

(d) £25 = TU – TE = £45 − £20

(e) 4 units
(f) TCS is maximised when MU = P

[5]

Most candidates provided a good answer to this question.

36 (a) Y = C + I + G
Y = 10 + 0.75Y + 20 + 40
0.25Y = 70
Y = 280

(b) Yd = C + S

Yd = (1 − 0.1)(280) = 252

C = 0.75Y + 10 = 220

S = Yd – C = 252 – 220 = 32

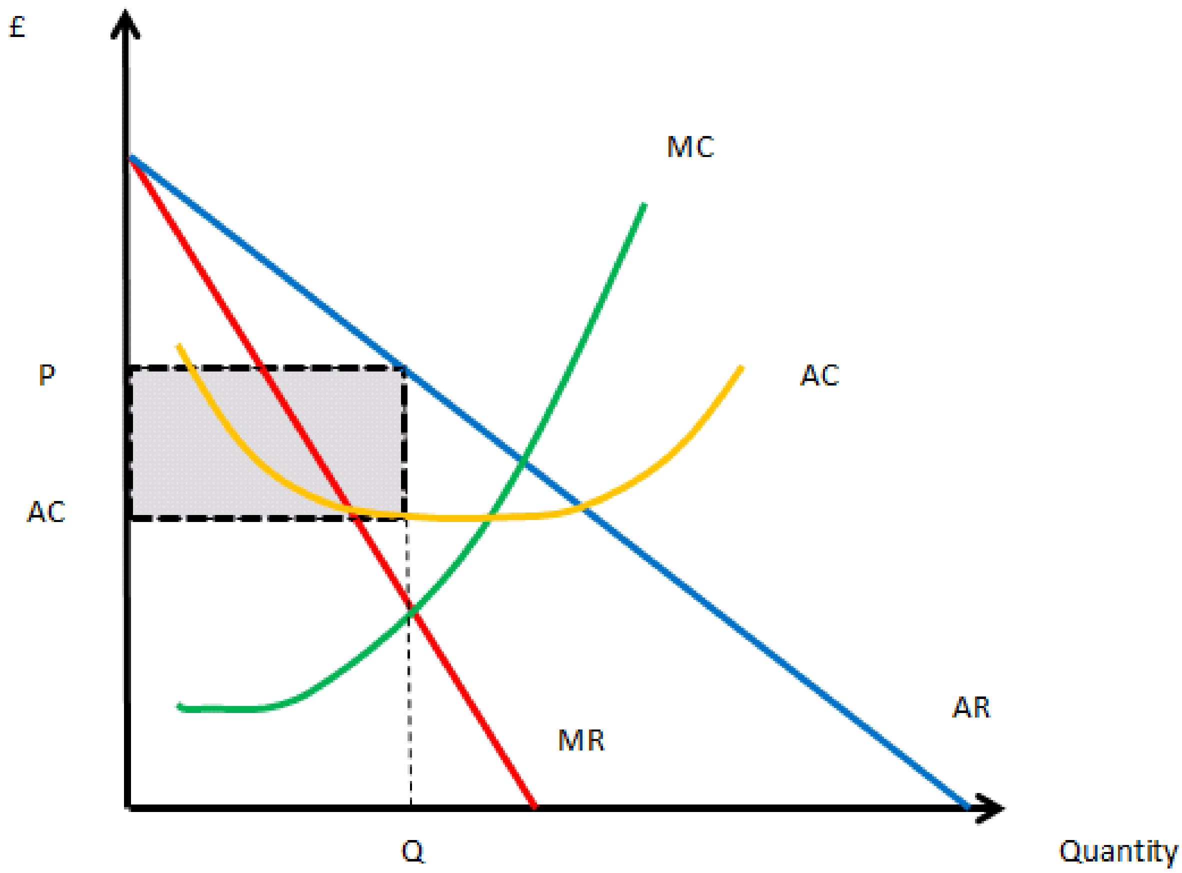
(c) Withdrawals = S + T = 32 + 0.1(280) = 60

(d) Y = C + I + G
Y = 10 + 0.75Y + 20 + 50
0.25Y = 80
Y = 320

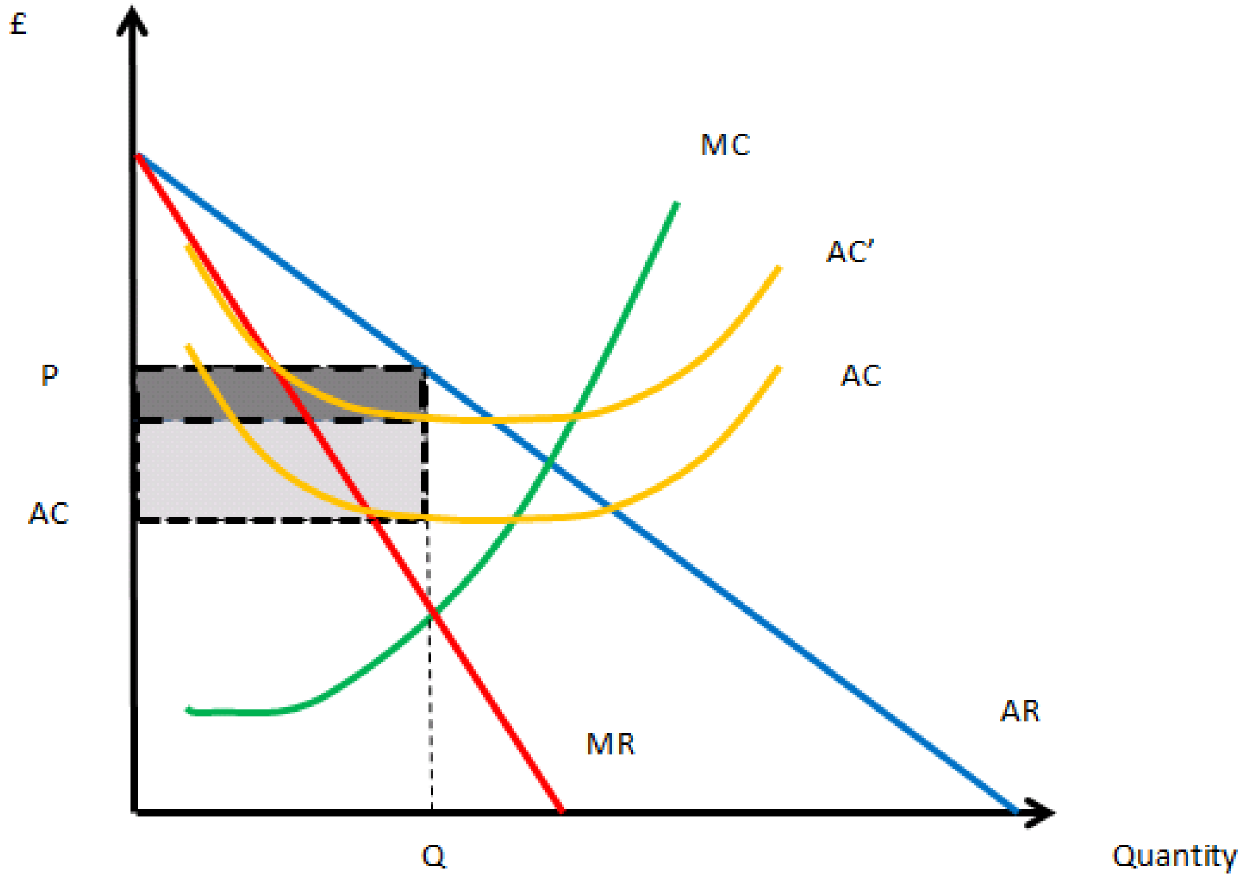
[4]

The performance on this question was encouraging. Most candidates succeeded in offering a good answer.

37 (i) As it is clearly one firm, a monopoly is the correct market structure. Monopoly Characteristics: one firm is the industry, unique product, no close substitutes for the good or service, there are considerable barriers to entry which could be the control of a resource, legal barriers or natural barriers, firm has considerable influence over price and maximises profits where MC =MR, Output Q and Price P as shown below and total profit shown by the shaded area.

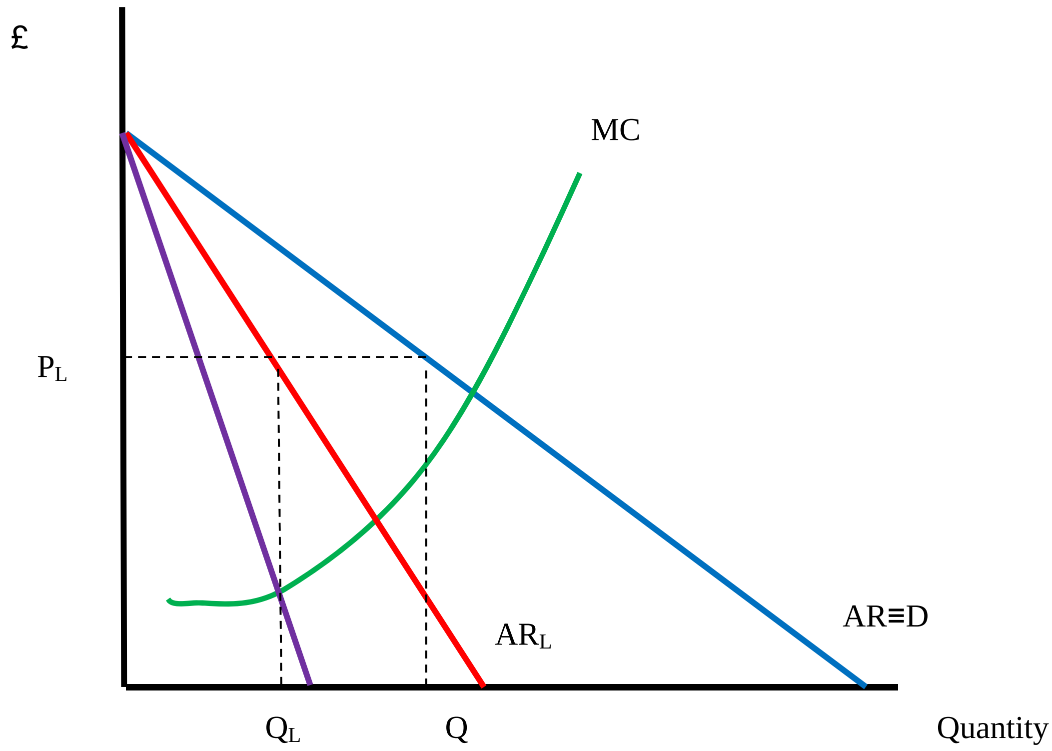


(ii) This licence fee would represent a fixed cost to Cititravel –impact on fixed costs and therefore total costs and profit . AC curve shifts up. No change in output Q and price P but reduced level of profits shown in the diagram in the darker shaded box. [3]



[4]

(iii) With Cititravel being the dominant firm leader and the assumption that it will have a 50% market share, it will produce at Q_L which is half of the new total quantity traded Q. At quantity $Q_{L,}$ Cititravel will charge a price of P_L which other firms also charge. The quantity traded by Cititravel under an oligopoly price leadership structure will be half the quantity now traded as the market demand is split between Cititravel and the new entrants and at a lower price than under monopoly.



[3]
[Total 10]

Part (i) of this question was answered well by most candidates. Answers to part (ii) and (iii) were of variable standard. In part (iii) a common error made was not drawing the industry and firm's demand lines to meet at the same point on the vertical axis.

38 (a) Frequent changes in the currency value could adversely affect trade and investment by creating uncertainty and undermining business confidence. Governments, therefore, may wish to prevent such fluctuations in the currency value. The measures available to the central bank in this regard would depend on whether the aim is to curtail the day-to-day or longer term changes in the exchange rate.

If the government aims to maintain the value of the currency close to a long term equilibrium value, it could buy/sell the domestic currency in the foreign exchange market to prevent it from falling too far below/above the desired level. If factors causing the downward pressure on the currency cause the demand curve to shift left or the supply curve to shift right, for example, the central bank's intervention will result in reverse shifts in the demand and supply curves and the desired exchange rate will be restored.

To alleviate the downward pressure on the currency, a government could alternatively borrow foreign currency from other countries or international agencies such as IMF. It could use the loan to buy the domestic currency in the foreign exchange market. This will result in returning the demand and supply curves to the original positions and the currency value to resume its original level.

Yet another measure for governments is to raise interest rates temporarily. This will encourage those abroad to deposit their money in the domestic country and the domestic residents to keep their money in their own country. Raising interest rates will result in an increase in the demand for, and decrease in supply of, the currency.

The above measures, though they can be implemented to control day-to-day fluctuations, will not be sustainable in longer term. (Explanation of the reasons in terms of depletion of foreign reserves, high cost of foreign debt, uncertainty about interest rate movements needs to be provided.)

Governments can use fiscal and monetary policies to maintain the value of the currency for longer periods such as months or years.

Contractionary fiscal and monetary policies, for example, could be used to dampen aggregate demand. A contractionary fiscal policy would involve raising taxes and /or reducing government expenditure. A contractionary monetary policy would involve raising interest rates to reduce borrowing and hence reduce aggregate demand.

A dampening of aggregate demand will reduce consumer spending including expenditure on imported goods, thereby reducing the supply of the currency in the foreign exchange market. A reduction in aggregate demand will also reduce inflation. With lower prices in the domestic economy, exports will be cheaper and more attractive to consumers abroad who will increase their demand for the domestic currency. There will also be less demand for more expensive foreign goods leading to lower imports and lower supply of the domestic currency. Both effects will result in supporting the value of the currency.

Perhaps the most sustainable measure, for example, to support a currency is for the government to implement supply side policies. This would involve improving the long term competitiveness of the domestic industry by encouraging improvements in the quality of the goods produced and/or reducing production costs. These are achieved by improving the quality of training and/or research and development.

(b) Governments can restrict access to foreign exchanges which will restrict the outflow of the currency, thereby reducing the supply of the currency to support its vale. However, to the extent that long term use of this measure would restrict international trade and free movement of capital, benefits from trade will be foregone. Loss of advantages from international trade are gains from cost differences between countries, decreasing costs resulting from economies of scale, differences in demand conditions in countries, increased competition, growth in exports in line with growth in world demand and other advantages related to social, political and cultural factors that are foregone. Restricting foreign exchange trading will restrict free movement of capital and inhibits foreign investment in the country. Import restrictions could provoke retaliation by other countries, restricting trade further. [10]

In this question, few fully explained answers were offered for both parts. Common areas of deficiency in answers were a focus on why governments would want a stable exchange rate but little on how to achieve it, and also no distinction between the short and long term measures.

END OF EXAMINERS' REPORT