

| YEAR | PART (of Tripos) | PAPER NUMBER & TITLE | NAME OF AUTHOR |
|------|------------------|---|----------------|
| 2014 | MET IIA | P5 3P8 Financial & Mgm't Acc 3P9 Industrial Economics | C Velu |

Section A

Question 1.

| | | |
|--|-------|-------|
| a. (1) Cash (+A)..... | 7,000 | |
| Fees Earned (R, +SE)..... | | 7,000 |
| <i>Rendered services in cash.</i> | | |
| (2) Cash (+A)..... | 3,000 | |
| Accounts Receivable (-A) | | 3,000 |
| <i>Collected cash from customers on account.</i> | | |
| (3) Liabilities (-L) | 3,000 | |
| Cash (-A)..... | | 3,000 |
| <i>Made payment on outstanding liabilities.</i> | | |
| (4) Long-Term Assets (+A) | 6,000 | |
| Note Payable (+L)..... | | 6,000 |
| <i>Purchased long-lived assets.</i> | | |
| (5) Miscellaneous Expenses (E, -SE)..... | 4,000 | |
| Cash (-A)..... | | 4,000 |
| <i>Incurred and paid miscellaneous expenses.</i> | | |
| (6) Dividends (-SE)..... | 800 | |
| Cash (-A)..... | | 800 |
| <i>Declared and paid dividends.</i> | | |

+=Increase and - = Decrease; A=Asset; L=Liability; SE=Shareholders Equity; R=Revenue; E=Expense

b.

| Entire Home Services Income Statement For the Month Ended January 31, 2012 | |
|--|----------------|
| Revenues | £ 7,000 |
| Miscellaneous expenses | <u>4,000</u> |
| Net profit..... | <u>£ 3,000</u> |

Entire Home Services
Balance Sheet
January 31, 2012

| <u>Assets</u> | | <u>Liabilities and Shareholders' Equity</u> | |
|------------------------|-----------------|--|-----------------|
| Cash | £ 12,200 | Liabilities..... | £ 3,000 |
| Receivables | 1,000 | Notes payable | 6,000 |
| Long-term assets | <u>16,000</u> | Common shares | 10,000 |
| | | Retained earnings | <u>10,200</u> |
| Total assets..... | <u>£ 29,200</u> | Total liabilities and shareholders' equity..... | <u>£ 29,200</u> |

Entire Home Services
Statement of Cash Flows
For the Month Ended January 31, 2012

| | | |
|---|----------------|-----------------|
| Cash flows from operating activities: | | |
| Cash collections from customers | £ 10,000 | |
| Payment of expenses..... | <u>(4,000)</u> | |
| Net cash increase due to operating activities | | £ 6,000 |
| Cash flows from investing activities..... | | |
| | | 0 |
| Cash flows from financing activities: | | |
| Repayment of liabilities | £ (3,000) | |
| Dividend payment..... | <u>(800)</u> | |
| Net cash decrease due to financing activities..... | | <u>(3,800)</u> |
| Net increase in cash | | £ 2,200 |
| Beginning cash balance..... | | <u>10,000</u> |
| Ending cash balance..... | | <u>£ 12,200</u> |

c. Discuss the FIFO, LIFO and AVCO accounting treatment of inventory.

(i) FIFO – Assumes stock purchased first is sold first.

(ii) LIFO – Assumes stock purchased last is sold first.

(iii) AVCO – Stock value is recalculated to the average as new stock is bought or sold.

In the case of rising prices, the FIFO method will result in the highest profit followed by AVCO and LIFO. In the case of falling prices, the profit will be lowest for FIFO followed by AVCO then LIFO. The International Accounting Standard does not allow the LIFO method.

Comments: Students were getting the mechanics of parts (a) and (b) right. However, several students were not getting the presentation right (e.g., merely showing the workings on the Balance Sheet from one period to another rather than showing the journal entries for part a). Also, it is important to show the right headings and clearly show for which period are the different financial statements being drawn up. For part (c), some students assumed that the actual stock would be sold based on the method of accounting (e.g., First stocks in are sold first, in FIFO). This is incorrect as FIFO, LIFO, AVCO are merely methods for accounting for stock and does not necessarily depend on the actual management of stock.

Question 2.

a. Current Ratio = Current Assets ÷ Current Liabilities

2009: £20,000 ÷ £8,000 = 2.500

2010: £24,000 ÷ £13,000 = 1.846

2011: £31,000 ÷ £25,000 = 1.240

2012: £35,000 ÷ £30,000 = 1.167

Debt/Equity Ratio = Total Liabilities ÷ Total Stockholders' Equity

2009: (£8,000 + £15,000) ÷ (£20,000 + £10,000) = 0.767

2010: (£13,000 + £35,000) ÷ (£20,000 + £20,000) = 1.200

2011: (£25,000 + £40,000) ÷ (£20,000 + £32,000) = 1.250

2012: (£30,000 + £40,000) ÷ (£20,000 + £38,000) = 1.207

Assumption need to be made clear if only long-term debt is used.

Return on Assets = (Net Profit + Interest Expense) ÷ Average Total Assets

2009: (£13,000 + £2,000) ÷ [(£53,000)] = 0.283

2010: (£14,000 + £4,000) ÷ [(£53,000 + £88,000) ÷ 2] = 0.255

2011: (£21,000 + £5,000) ÷ [(£88,000 + £117,000) ÷ 2] = 0.254

2012: (£24,000 + £5,000) ÷ [(£117,000 + £128,000) ÷ 2] = 0.237

| b. | <u>2012</u> | <u>2011</u> | <u>2010</u> | <u>2009</u> |
|---|----------------|----------------|----------------|----------------|
| Current assets | 27.34% | 26.50% | 27.27% | 37.74% |
| Noncurrent assets | <u>72.66</u> | <u>73.50</u> | <u>72.73</u> | <u>62.26</u> |
| Total assets | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> |
| Current liabilities | 23.44% | 21.37% | 14.77% | 15.09% |
| Long-term liabilities | 31.25 | 34.19 | 39.77 | 28.30 |
| Share capital | 15.62 | 17.09 | 22.73 | 37.74 |
| Retained earnings | <u>29.69</u> | <u>27.35</u> | <u>22.73</u> | <u>18.87</u> |
| Total liabilities and shareholders' equity | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> | <u>100.00%</u> |

c. Solvency measures a company's ability to meet its debts as they come due. The current ratio provides one measure of a company's solvency. Based upon this ratio, Pinetechnic has sufficient current assets to meet its current obligations. However, the trend in its current ratio indicates that the company's excess of current assets over current liabilities is decreasing. Therefore, the company has relatively fewer current assets available to meet its current obligations. This trend indicates that Pinetechnic Enterprises' solvency position may be worsening.

The debt/equity ratio provides an indication of a company's capitalisation, which, in turn, indicates how risky a company is. Pinetechnic is relying increasingly on debt relative to stockholders' equity to finance operations. At some point in time, the company will have to repay this debt. The company will either have to repay this debt by (1) generating cash from operations, (2) selling assets, (3) borrowing additional cash, or (4) acquiring cash by issuing stock. From the statement of cash flows, the cash generated from operations has been decreasing and is now negative; therefore, it appears that the company cannot rely on operations to generate cash. The statement of cash flows also indicates that the company has been using cash for investment purposes every year. This implies that the company may have some assets that it could sell. But if these assets are used in operations, the company's operations may be adversely affected by selling them.

Since total assets equal the sum of total liabilities and shareholders' equity, the proportion of total liabilities to the sum of total liabilities and shareholders' equity reported on the common-size balance sheet equals the proportion of total liabilities to total assets. This measure indicates the proportion of total assets (based upon book value) that would have to be sold to satisfy all the company's obligations. To meet its obligations, Pinetechnic Enterprises would have to sell approximately 55% of its total assets, which would virtually decimate its asset base.

Based upon the trend in the current ratio, the debt/equity ratio, cash flows from operations, and the proportion of total liabilities to total assets, it appears that Pinetechnic Enterprises may face severe solvency problems as its long-term debt matures.

Earning power is defined as a company's ability to increase its wealth through operations and to generate cash from operations. Earning power and solvency are closely related. A company must have adequate resources to generate wealth. If a company experiences solvency problems, it will most likely have to divert its resources to paying its obligations. Therefore, due to its solvency problems, Lotechnic Enterprises may not have strong earning power. Although Lotechnic's net income has increased every year, the company's effectiveness at managing capital, as indicated by ROA, has decreased every year. This trend indicates that the company may have limited earning power. This conclusion is also supported by the trend in the company's cash flows from operations.

It must be remembered, however, that this analysis is based on very limited information. To adequately analyse a company, additional information would be needed. Complete financial statements, financial information for similar companies, and general economic information should all be considered when analysing a company's earning power and solvency position.

Comments: Students often omitted to add back the interest expense to the net profit in calculating the Return on Assets (ROA) for part (a). Many students were not able to answer part (b) well and merely reproduced the balance sheet for the four years.

Section B

Question 3.

(a) Calculate the cash flows and accounting profit before interest and taxation.

| Year | Sales | Expenses | Depreciation | Profit Before Interest and Tax | Less Interest | Less Tax | Add Depreciation | Other Cash Flows | Cash Flow |
|------|---------|-----------|--------------|--------------------------------|---------------|----------|------------------|------------------|-----------|
| 0 | | | | | | | | (700,000) | (700,000) |
| 1 | 340,000 | (40,000) | (70,000) | 230,000 | (20,000) | - | 70,000 | | 280,000 |
| 2 | 270,000 | (130,000) | (70,000) | 70,000 | (20,000) | (4,500) | 70,000 | | 115,500 |
| 3 | 320,000 | (160,000) | (70,000) | 90,000 | (20,000) | (18,375) | 70,000 | | 121,625 |
| 4 | 345,000 | (185,000) | (70,000) | 90,000 | (20,000) | (24,281) | 70,000 | | 115,719 |
| 5 | 430,500 | (205,000) | (70,000) | 155,500 | (20,000) | (48,361) | 70,000 | | 157,139 |
| 6 | 330,300 | (160,300) | (70,000) | 100,000 | (20,000) | (35,033) | 70,000 | | 114,967 |
| 7 | 200,600 | (100,100) | (70,000) | 30,500 | (20,000) | (16,825) | 70,000 | | 63,675 |
| 8 | 145,300 | (46,500) | (70,000) | 28,800 | (20,000) | (18,034) | 70,000 | | 60,766 |
| 9 | 85,200 | (28,100) | (70,000) | (12,900) | (20,000) | (6,925) | 70,000 | | 30,175 |
| 10 | 38,600 | (8,300) | (70,000) | <u>(39,700)</u> | (20,000) | - | 70,000 | 5,000 | 15,300 |
| | | | | <u><u>742,200</u></u> | | | | | |

(i) Payback

When do the cumulative cash outflows reach £700,000?

After four years cash flows are £632,844. Therefore, it is 4 years + (£67,156/£157,139)=4.43 years.

(ii) Accounting rate of return

$$\frac{\text{Average annual profit before interest and tax}^*}{\text{Initial investment}} = \frac{£742,200/10}{£700,000} = 10.6\%$$

*Note, the calculation excludes the final cash inflow. Even if the final cash inflow of £5,000 is included the return increases to 10.7%.

The calculation could also be done using profit after interest and tax as long as the assumptions are made clear.

(iii) Net present value (NPV)

| Year | Cash Flow | Discount rate 10% | Net Present Value | Discount rate 20% | Net Present Value |
|------|-----------|----------------------|----------------------|----------------------|----------------------|
| 0 | (700,000) | 1 | (700,000) | 1 | (700,000) |
| 1 | 280,000 | 0.9091 | 254,548 | 0.8333 | 233,324 |
| 2 | 115,500 | 0.8264 | 95,499 | 0.6944 | 80,203 |
| 3 | 121,625 | 0.7513 | 91,377 | 0.5787 | 70,384 |
| 4 | 115,719 | 0.6830 | 79,036 | 0.4823 | 55,811 |
| 5 | 157,139 | 0.6209 | 97,568 | 0.4019 | 63,154 |
| 6 | 114,967 | 0.5645 | 64,899 | 0.3349 | 38,502 |
| 7 | 63,675 | 0.5132 | 32,678 | 0.2791 | 17,772 |
| 8 | 60,766 | 0.4665 | 28,347 | 0.2326 | 14,134 |
| 9 | 30,175 | 0.4241 | 12,797 | 0.1938 | 5,848 |
| 10 | 15,300 | 0.3855 | <u>5,898</u> | 0.1615 | <u>2,471</u> |
| NPV | | | <u>62,597</u> | | <u>(118,397)</u> |

The NPV is £62,597 at 10% so we can go ahead with the project.

(iv) Internal rate of return (IRR)

To calculate the IRR, we need discount rates which give positive and negative NPVs. We use the formula:

IRR=Lowest discount rate + difference in discount rate x (Lower Discount rate/Difference in NPVs)

$$=10\% + (10\% * \frac{£62,597}{£62,597 - (£118,397)}) = 13.5\%$$

Note: The negative NPV could also be calculated from the 15% discount rate.

Therefore, Mirage which has a cost of capital of 10% it would be worthwhile undertaking the project.

(b) Other relevant financial information that might be needed are as follows

- (i) The term structure of interest rates – changes in interest rate could affect the cost of capital.
- (ii) Effects on sales of other products - cannibalisation or increased sales on other products could also impact on the decision to launch.
- (iii) Any potential changes in tax legislation – changes in tax legislation could either increase or decrease the cost.
- (iv) Sensitivity of the revenue and cost numbers – if the revenue and cost numbers are very sensitive and hence subject to more risks then the investment is less attractive.

Comments: Overall the question was well done. However, often students did not write out the header for their cash flow tables clearly which made it difficult to assess what the cash flows were for. There was also confusion in terms of how to adjust for depreciation e.g., cash flows as opposed to accounting profit. Some students did not have time to complete the IRR calculation because they did not use the simple interpolation method but tried to calculate via iterative guessing/recalculating.

Question 4.

(a) (i) **Traditional Overhead Allocation**

Total costs = £115,000 (£10,000 + 60,000 + 40,000 + 5,000)

Assembly hours 100,000

= £1.15 per labour hour

| | | <i>Red</i> | | <i>Green</i> |
|----------------------|------------------|--------------|------------------|---------------|
| <i>Product Costs</i> | | £ | | £ |
| Direct materials | | 8 | | 100 |
| Direct labour | (6 hours × £5) | <u>30</u> | (4 hours × £5) | <u>20</u> |
| <i>Prime Cost</i> | | 38 | | 120 |
| Overhead | (6 hours × 1.15) | <u>6.90</u> | (4 hours × 1.15) | <u>4.60</u> |
| <i>Total Cost</i> | | <u>44.90</u> | | <u>124.60</u> |

(ii) **Activity-Based Costing**

(a) *Calculation of activity-cost driver rates*

| Activity | <i>Assembly</i> | <i>Stores</i> | <i>Inspections</i> | <i>Set up</i> | <i>Total</i> |
|---------------------------------|-----------------|----------------|--------------------|----------------|--------------|
| Cost/ | <u>£10,000</u> | <u>£60,000</u> | <u>£40,000</u> | <u>£5,000</u> | |
| Cost driver | 100,000 | 1,500 | 600 | 500 | |
| | <i>hours</i> | <i>notes</i> | <i>inspections</i> | <i>set-ups</i> | |
| Cost per unit of cost driver | £0.10 | £40 | £66.67 | £10 | |

(b) *Costs absorbed into products*

| | | | | | |
|------------------------------|---------------|-----------|--------------|-------------|----------|
| Red | £9,000 | £24,000 | £17,133 | £2,000 | £52,133 |
| | (90,000×£0.1) | (600×£40) | (257×£66.67) | (200×£10) | |
| Green | £1,000 | £36,000 | £22,867 | £3,000 | £62,867 |
| | (10,000×£0.1) | (900×£40) | (343×£66.67) | (300 × £10) | |
| <i>Total Allocated Costs</i> | £10,000 | £60,000 | £40,000 | £5,000 | £115,000 |

| <i>Total overhead costs</i> | <i>Total overheads</i> | <i>Units</i> | <i>Overheads per unit</i> |
|-----------------------------|------------------------|--------------|---------------------------|
| Red | £52,133 | 15,000 | £3.48 |
| Green | £62,867 | 2,500 | £25.15 |

| Product Costs | <i>Red</i> | | <i>Green</i> | |
|----------------------|--------------|----------------|---------------|----------------|
| | £ | | £ | |
| Direct materials | 8.00 | | 100.00 | |
| Direct labour | <u>30.00</u> | (6 hours × £5) | <u>20.00</u> | (4 hours × £5) |
| <i>Prime Cost</i> | 38.00 | | 120.00 | |
| Overheads | <u>3.48</u> | | <u>25.15</u> | |
| <i>Total Cost</i> | <u>41.48</u> | | <u>145.15</u> | |

(b) There is a big difference on the cost of the Green, which is a low-volume product. The Green costs are £145.15 using activity-based costing, but £124.60 using traditional cost recovery. In particular, inspections and stores requisitions are costly. This would make an important difference when setting a selling price.

The cost of Red on the other hand goes down from £44.90 to £41.48 between the absorption costing and activity-based costing respectively. Red benefits because it is penalised for high assembly hours via the absorption costing method but is more efficient in using the other cost drivers for the activity-based costing method.

Traditional product costing was developed during the industrial revolution. Manufacturing industry was predominant. The factories were characterised by a huge capital investment in machinery and a large workforce. Traditional product costing is characterised by huge quantities of direct labour and direct material. Overheads were relatively small. So it made sense to recover these overheads using volume measures such as machine hours or labour hours. This was the absorption costing method.

Over the last generation, however, there has been a marked shift in the economic base of developed countries. Manufacturing industry is less dominated by direct labour. Service industries (such as those concerned with finance, marketing, transport, and the Internet), have grown in importance. These industries do not employ huge quantities of direct labour, do not manufacture products nor have large capital investments in machinery. Traditional product costing thus becomes less appropriate. In these industries, new methods or recovering overheads are needed. Thus, we have activity-based costing, which strives to recover overheads according to their relationship with activities, rather than volume-driven production measures. Activity-based costing identifies factors that influence cost and seeks to recover costs using these factors.

Comments: Overall this question was well answered. For part (a) it would be helpful to distinguish between the prime cost and the overheads.

Section C

Question 5.

(a) In the Cournot duopoly model the firms decide on the quantity assuming that the price changes to clear the output. Each firm has to choose a quantity of output to produce given the other firm's choice of output in order to maximise profits. Market price decreases with output. The Nash equilibrium is the pair of outputs such that each firm's action is a best response to the other firm's action. The firm changes its behaviour if it can increase its profit by changing its output, on the assumption that the output of the other firm will not change but the price will adjust to clear the market. Total output lies between monopoly output and the competitive output.

In the Bertrand duopoly model the strategic variable is the price rather than output. Consumers buy from firm with lowest price and firms produce what is demanded. The Nash equilibrium is the pair of prices such that each firm's action is a best response to the other firm's action. This equilibrium price equals the cost of producing the output. If each firm charges the price of c (cost of production) then the other firm can do no better than charge the price of c also (if it raises its price it sells no output, while if it lowers its price it makes a loss), so (c, c) is a Nash equilibrium. The Bertrand model with two firms is perfectly competitive (The Bertrand paradox). The price associated with an equilibrium in the Cournot's model is higher than c .

The Bertrand paradox can be solved by relaxing assumptions about costs (flat costs to capacity constraints), one period to many periods, homogeneous products to product differentiation, fixed number of firms to entry/exits.

(b) Summarise key points for usefulness of game theory in strategic management:

Game theory is helpful because:

- (i) Help us understand business situations
- (ii) Provides a set of tools to structure our view of competitive interactions.
- (iii) Provides a systematic framework for exploring dynamics of competition
- (iv) Provides a basis of changing the game and thinking through the likely outcomes of such changes.

Weaknesses of game theory are:

- (i) Game theory provides clear predictions in highly stylised situations involving few external variables and restrictive assumptions.
- (ii) Mathematically sophisticated but suffers from unrealistic assumptions, lack of generality and analysis of dynamic situations through a sequence of static equilibriums.
- (iii) Could result in no equilibrium or multiple equilibrium for complex situations
- (iv) Specifies all possible actions/strategies and does not allow for ambiguity
- (v) Game theory typically deals with closely matched players where each has a similar range of strategic options where outcome dependent on order of moves, signals, bluffs and threats. However, strategic management is about transforming competitive games through building positions of unilateral competitive advantage.

Providing simple examples (e.g., Prisoner's Dilemma etc) to illustrate the arguments.

Comments: Fewer students answered this question relative to the others. Overall students who answered this question did cover the points well and had a good grasp of the concepts. For part (a),

the better answers were able to draw out the limitations of the duopoly models and discuss the extensions. Similarly, for part (b), the better answers were able to discuss the limitations of game theory and its applicability.

Question 6.

(a) “Hypermarts” could conceivably achieve several economies of scale by offering a wide array of consumer products in one store. First, if the firm has already purchased expensive real estate and could build a slightly larger building, it can enjoy economies of scale by effectively spreading these high fixed costs across a wider array of products. Second, a firm that already has a strong reputation with consumers could enjoy marketing economies of scale using their existing branding umbrella. Third, the firm could achieve greater economies of scale by using its current distribution systems to deliver more products to fewer large stores. Finally, a “hypermart” may realise purchasing economies because it turns over products quickly, buys in bulk, and becomes a desirable channel in the eyes of product manufacturers.

Despite these potential benefits, there are some limits to economies of scale. For instance, a “hypermart” could spread specialised labour such as talented store managers so thinly that they have a difficult time managing and monitoring the entire store. Because the store has lost its niche focus, both the store’s old and new services may be adversely impacted. Additionally, the firm may damage its reputation with core consumers by expanding its products well beyond the range for which it is known.

(b) Ensuring supply might be a valid argument for vertical integration if the raw material was extremely illiquid and inefficient. However, if it is traded freely on world commodity exchanges there are no economic benefits to vertical integration that cannot be achieved through market exchange—an arms-length transaction is simply internalised within the firm if transfer prices are set at the market level. However, if transfer prices are held constant, this will lead to inefficient use of the raw material. The firm will fail to use the optimal quantity of say, raw materials in downstream production and would subsidise its upstream division when market prices were low or support its downstream division when market prices were high.

(c) A complete contract eliminates opportunities for shirking by stipulating each party’s responsibilities and rights for each and every contingency that could conceivably arise during the transaction. By using a complete contract, a firm can get its trading partner to mimic any and all of the steps that would have been taken by a vertically integrated firm, as well as replicate the profits accruing to each participant in the vertical chain. However, it is rarely possible to write a complete contract as there are many contingencies that cannot be fully anticipated.

Comments: Part (a) was well answered by most students. Parts (b) and (c) were more varied. The better students typically provided references to literature and examples to support and illustrate their arguments.

Section D

Question 7.

(a) Business model is the customer value proposition, method of value creation and the approach to value capture. A business model innovation involves systemic changes to the value proposition (such as the marketing mix e.g., product, price, promotion and place (distribution)), value creation (manufacturing, operations and distribution), the approach to value capture (revenue and cost architectures) and the value network (i.e partners). A product innovation on the other hand might involve changes to the product but not necessarily all elements of the value proposition, value creation, value capture and value network. A process innovation involves changes in the process (e.g., manufacturing method) but not all elements of the value proposition, value creation, value capture and value network.

(b) Business model innovation typically creates superior competitive advantage compared to product and process innovations because:

- i. For competitors it is difficult to identify (as one cannot understand easily what components have been changed and how they have been put together) – systemic nature of change
- ii. It is difficult for competitors to replicate even if they were able to identify the components of change

(c) Challenges typically faced by firms include

- i. Cognitive biases (due to dominant designs) by senior management (e.g., Xerox, Polaroid)
- ii. Inability to reconfigure competencies
- iii. Inability to coordinate change
- iv. Political factions within a firm

The above answers need to be discussed with examples of firms from either the academic literature or other sources (e.g., business press etc).

Comments: The question required an understanding of the difference between business model innovation and other forms of innovation including a discussion of the challenges in trying to innovate the business model. Most students answered the parts (a) and (b) reasonably well. For part (c) the better students were able to give examples of business model innovation across different industries to support their answers.

Question 8.

(a) Two-sided markets are markets where two different types of users may realise gains by interacting with each other through a common platform. For example, Adobe Acrobat, Ebay etc

(b) In two-sided markets because of the interconnected nature of the market the number of customers on one side affects the number of customers on the other side. Demand side network externality is where the addition of a customer adds value to other customers. Many industries such as telecommunications and financial services among others tend to display demand side externalities.

The price elasticity of demand is defined as the percentage change in quantity brought about by one percentage change in price. Inelastic demand implies less sensitivity (elasticity <1) and elastic is higher sensitivity (elasticity >1). Cross-price elasticity is a measure of the sensitivity of the price on one side of the market affecting the number of customers/users on the other side of the market.

(c) ConnectWorld needs to study and estimate the effects of this cross-price elasticity in order to develop a pricing strategy. In extreme cases, it might be appropriate to give away for free the proposition to one side of the market in order to generate users on the other side that could be charged. This is when the lost revenue from not charging is lower than the gains from charging the other side. Examples include Adobe Acrobat. Other factors to consider are, consumer preference changes in the future, competitive effects and the effect on the brand and potential future propositions.

Comments: The first two required an understanding of two-sided markets and cross price-elasticities and were well answered. Part (c) of the question required an application of the concepts to a pricing situation – the better answers were able to discuss other case examples in supporting their arguments.