

**2012 Manufacturing Engineering Tripos IIA Paper 5: Financial and Management
Accounting & Industrial Economics, strategy and Governance
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**Module 3P8: FINANCIAL AND MANAGEMENT ACCOUNTING
(Sections A and B)**

**CRIB
SECTION A**

Question 1

(a)	Profit before tax	£132,593	
	Depreciation charge	£8,742	
	Increase in payables	£9,429	
	Tax paid	£(7,374)	
		£143,390	

NB Interest has no effect as the amount charged is the same as the cash flow.

(b)	Net book value	£754,860	
	Tax written down value	£543,875	
		£210,985	
	Timing difference	£210,985	
		£42,197	
	Provision required at 20% =	£42,197	
	Brought forward	£39,853	
		£2,344	
	Increase	£2,344	

(c)	Consideration 480,000 shares at £4.28 =	£2,054,400	
	Non controlling interest		
	120,000 shares at £4.28 =	£513,600	
		£2,568,000	
	Book value of net assets	£2,356,920	
	Fair value adjustment	£110,000	
		£2,466,920	
			Goodwill £101,080

(d)	Profit after tax = 20m shares x £1.00 (i.e. 5 x £0.20) =	£20m
		£m
	Net profit before interest and taxation	30.0
	<i>Less interest (one-sixth)</i>	<i>5.0</i>
		25.0
	Net profit before taxation	25.0
	<i>Less taxation (one-fifth)</i>	<i>5.0</i>
		20.0
	Net profit after taxation (as above)	20.0

(e) (i)

Option 1

This option would mean that Black would become a subsidiary of Keynes. This is because Keynes would be in a position to exercise control over Black as a result of holding the majority of the shares and controlling the board of directors.

It would lead to an additional asset for £229,600 being reported on the balance sheet of Keynes, to reflect the cost of the shares being acquired. The value of Keynes's cash at bank would be reduced by a similar amount.

There would be no impact on the financial statements of Black, as all that will have happened is that the identity of the holders of some of the shares will have changed.

It would also be necessary to prepare consolidated financial statements to reflect the activities of the combined entities, although there would be no legal entity created by the investment.

The consolidated accounts would report the combined assets and liabilities of both entities, but the investment reported in the balance sheet of Keynes would cancel out against the share capital and the profit (at the date of the acquisition) of Black.

Also, as Keynes would not hold all the shares in Black, it will be necessary to report the value of the combined net assets which are held outside the group. This is referred to as 'Minority interest'.

Option 2

In this case, Keynes will be able to influence the activities of Black, but may not be able to exercise control. This means that Black would be an associate of Keynes.

As in option 1, Keynes will report an investment at cost in its balance sheet, and the cash balance will fall by the cost of the investment.

Once again, there will be no effect on the financial statements of Black.

Although it will be necessary to prepare consolidated financial statements, the treatment of the net assets of Black will be different. In this case the equity method of accounting is used. This means that the net assets will be reported as a single figure, which represents the share of the net assets controlled by Keynes.

As only the group's share of the net assets is reported, there will be no minority interest.

The cost of the investment in Keynes's balance sheet will also cancel out against the share capital and profit (at the date of the acquisition) of Black.

(ii)

Keynes Group
Consolidated Balance Sheet as at 31 July 2011
£000 £000

Non-current assets		
Tangible non-current assets		700.0
Goodwill (W1)		120.4
Current assets		
Inventory	122.0	
Receivables	161.0	
Cash (240.0 – 229.6)	10.4	
		<hr/>
		293.4
		<hr/>
		1,113.8
		<hr/>
Equity		
Share capital		460.0
Retained profit (W2)		382.6
Minority interest (W3)		52.2
		<hr/>
		894.8
Current liabilities		
Payables	212.0	
Overdaft	7.0	
		<hr/>
		219.0
		<hr/>
		1,113.8
		<hr/>

Working 1 *Goodwill*

Cost of investment
70% of 80,000 shares at £4.10 = £229,600

Value acquired		
Share capital	£80,000	
Profit	£76,000	
	<hr/>	
	£156,000 x 70% =	£109,200
		<hr/>
Goodwill		£120,400
		<hr/>

Working 2 *Consolidated profit*

Keynes		£370,000
Share of Black:		
Profit for year £ 18,000 x 70%		£12,600
		<hr/>
		£382,600
		<hr/>

Working 3 *Minority interest*

Share capital	£80,000	
Profit	£94,000	
	<hr/>	
	£174,000 x 30%	£52,200

Question 2

- (a) $EPS = MV/P/E \text{ ratio}$
 = £12/10
 = £1.20
 Dividend per share = $EPS \times \text{dividend payout}$
 = £1.20 x 40%
 = £0.48
 Dividend yield = $(DPS/MV) \times 100$
 = $(£0.48/£12) \times 100$
 = 4% or 0.04

- (b) The EPS will be the same when:
 $0.8P/250 = 0.8(P - 15)/150$
 $120P = 200(P - 15)$
 $120P = 200P - 3,000$
 $80P = 3,000$
 $P = 37.5(000)$

- (c) **Original value = 875,000**
 The service charge should be written off to the income statement. The other costs represent the cost of the property, and therefore the value at which it should initially be recognised.
 Charge to income statement = Nil
 At the date of the revaluation in May 2009, the market value was £100,000 above the carrying value. This amount would have been taken to a revaluation reserve, and could be used subsequently to offset any fall in value for this property. Following the depreciation charge of £24,375 per annum for two years, the carrying value at 31 May 2011 would have been £926,250. The fall in value to £830,000 is therefore less than £100,000. When the balance on the revaluation reserve in respect of this property is offset, there is no effect on the income statement.

- (d) (i)
 An asset is defined as 'a resource controlled by an entity as a result of a past event or transaction from which future economic benefits are expected to flow to the entity'.
 An asset is classified as current if it is intended for sale or consumption in the entity's normal operating cycle. All other assets are classified as non-current.

A liability is defined as 'a present obligation arising from past events, the settlement of which is expected to result in an outflow of resources'.

A liability is defined as current, if it falls to be settled within the next operating cycle of the business. All other liabilities are non-current.

(ii)

Trade receivables are an example of a current asset.

Property, plant and equipment is an example of a non-current asset.

An amount due to be repaid on a loan is a liability. The amount of capital which must be repaid in the next operating cycle (usually one year) is a current liability.

The capital due for repayment in subsequent operating periods (usually more than one year) is an example of a non-current liability.

(e) (i)

The effect of each of the items on the accounting equation is as follows:

Item	Assets	Liabilities	Capital	
(i)	reduced	unchanged	reduced	by £11,505
(ii)	increased	unchanged	increased	by £12,640 (or £2,077)
(iii)	unchanged	increased	reduced	by £1,564
(iv)	increased	unchanged	increased	by £955

(ii) Stan Metcalfe Statement of financial position (balance sheet) at 30 November 2011

Assets		£	£
Non-current assets			
Equipment	£42,700 – (£24,588 + £6,405)		11,707
Motor vehicles	£25,500 – (£16,320 + £5,100)		<u>4,080</u>
			15,787
Current assets			
Inventory		12,640	
Trade receivables		15,649	
Prepaid expenses		955	
Bank account		<u>653</u>	
			<u>29,897</u>
			<u>45,684</u>
Liabilities and capital			
Current liabilities			
Trade payables		13,387	
Accrued expenses		<u>1,564</u>	
			14,951
Capital (W1)			
			<u>30,733</u>
			<u>45,684</u>
W1	Opening balance	£23,374	
	Profit (W2)	£29,859	
	Drawings	<u>£(22,500)</u>	£30,733

W2 Profit is calculated as follows:

	£	£
Sales		156,843
Cost of sales		
Opening inventory	10,563	
Goods for resale	86,328	
Less Closing inventory	<u>(12,640)</u>	
Gross profit		<u>84,251</u>
Less Expenses		
Wages	24,442	
Electricity	4,729	
General expenses	1,448	
Depreciation:		
equipment	6,405	
motor vehicles	5,100	
Accrued expenses	1,564	
Prepaid expenses	<u>(955)</u>	
		<u>42,733</u>
		<u>29,859</u>

SECTION B

Question 3

(a) Standard output:

11 staff x 30 productive hours per week x 4 weeks x 2 per hour = 2,640

Actual output 2,850

Variance 210

As the actual output is greater than standard, this is a favourable variance

Standard cost per question is £11.38 per query

Variance of 210 queries at £11.38 = £2,389.80

(b) The maximin criterion assumes that, for each option, the worst outcome will occur.

The best result from these outcomes indicates the option which should be selected.

The worst outcome for each option in this case is: £12: £288,000

£13: £296,000

£14: £275,000

£15: £264,000

Of these, £296,000 is the highest, so the option leading to this result (£13) should be chosen.

(c) Processing Cost per hour	£8	(£17,500 ÷ 2,187.5)	
	x 0.4 hours		£3.20
Handling Cost per order	£0.70	(£33,810 ÷ 48,300)	
	x 6 orders		£4.20
Overhead cost			£7.40
Direct cost			£5.78
			<u>£13.18</u>

(d) The operating cash cycle is:

$$5 + 1 + 2 + 3 - 4 = 7 \text{ weeks}$$

(e) (i) Incremental cash flows

Year to 30 November

	Present	2008	2009	2010	2011
	£m	£m	£m	£m	£m
Revenue		18.3	22.5	12.6	7.2
Equipment	(6.0)				2.0
Salary and wages		(12.7)	(14.4)	(6.6)	(2.5)
Materials and components	0.2				
Overheads		(1.2)	(1.2)	(1.2)	(1.2)
Working capital	(2.5)				2.5
	(8.3)	4.4	6.9	4.8	8.0
Discount factor	1.00	0.91	0.83	0.75	0.68
Present value	(8.30)	4.00	5.73	3.60	5.44

Net present value is 10.47

The NPV is positive and so acceptance of the project is expected to enhance shareholder wealth. Given the objectives of the company, which were stated in the question, the project proposal should be accepted.

(ii) Notes

Only future, additional cash inflows and outflows arising from the investment decision are relevant when assessing the future profitability of the proposed project. Thus, when calculating the net present value of the new drill, the following adjustments were made to the figures provided:

1. The cost of materials and components were ignored as they were already held in stock, had no market value and could not be used for any other purpose. However, the additional cost of disposing of the materials and components, in the event that the new drill is not produced, is taken into account. A decision to go ahead with the investment project will lead to a cost saving.

2. Only the additional overheads arising from Project XK150 are included in the NPV calculations and other overheads, which do not arise as a direct result of the project, are ignored.
3. Depreciation, which is a non-cash item, is excluded from the NPV calculations. The relevant cash outflows relating to the equipment occur at the time of purchase and sale.
4. The current market value of the plant and equipment represents cash foregone and is therefore included in the calculations. (The net book value of the equipment is based on past outlays and is not, therefore, relevant.)
5. The residual value of the plant and equipment at the end of the four-year period is a relevant future benefit that should be included.
6. The working capital investment at the beginning of the four-year period and its release at the end of this period represent cash inflows and outflows that should be included.
7. The development costs have already been incurred. Thus, they are sunk costs that should be ignored.
8. Interest charges should be ignored. The cost of financing the project is reflected in the discount factor and so to include these charges as cash outflows would result in double counting.

(iii) The net present value (NPV) method is appropriate because the question states that the company is committed to maximising the wealth of its shareholders. The NPV method is entirely consistent with the pursuit of this financial objective. It takes account of all relevant cash flows and also takes account of the time value of money by discounting future net cash flows to their present value. The net present value (NPV) of the cash flows is used as the basis for an accept/reject decision. If the NPV of the future discounted cash flows is positive, the project should be accepted as this indicates that shareholder wealth will be increased. If, however, the NPV is negative, the project should be rejected as this indicates that shareholder wealth will decrease.

Question 4

(a)	Operating profit	£586,900	
	Imputed interest	<u>£359,772</u>	(£2,569,800 x 14%)
	Residual income	£227,128	
	NOPAT	£491,300	(£586,900 – £95,600)
	Economic return	<u>£445,200</u>	(£3,180,000 x 14%)
	EVA	£46,100	

(b) Material used 39,060 kgs

£72,000 for 18,000 units = £4 per unit
Each unit requires 2 kg, thus standard cost is £2 per kg

Production should have cost	£78,120	(39,060 kgs x £2)
but did cost	<u>£76,167</u>	
Variance	£1,953 Favourable	

(c)	Investment	Initial outlay	PV of net cash inflows	Profitability index	Ranking
		£m	£m		
	Kaldor	186	211	1.1	4
	Godley	65	84	1.3	2
	Stone	100	120	1.2	3
	Cripps	50	71	1.4	1

(d)	Current pricing policy		
	Direct cost	£124.50	
	Overheads	<u>£91.20</u>	
	Total cost	£215.70	
	Margin	<u>£71.90</u>	(1/3 of total cost = 25% margin)
	Selling price	£287.60	

Target price £265, less 25% margin = £198.75
Total cost currently exceeds this by £16.95

(e) (i) Current policy

Overhead costs £1,810,000
Jobs 48,000
27 hours per job = 1,296,000 labour hours

Cost per labour hour = £1,810,000 / 1,296,000 = £1.397

Each job requires 27 hours
Thus overhead cost per job is £1.397 x 27 = £37.72

ABC

Cost	£	Cost driver	Volume	Cost per unit of cost driver
Machine costs	840,000	Machine hours	24,000	£35.00
Maintenance:				
Set up	150,100	Production runs	200	£750.50
Preventative	158,000	Machine hours	24,000	£6.58
Repairs	86,900	Machine hours	24,000	£3.62
Mat Handling	260,000	Deliveries	1,040	£250.00
Sales order processing:				
Internet	189,000	Orders	36,000	£5.25
Telephone	126,000	Orders	12,000	£10.50

Cost per order

Machine cost	48,000 orders = 48,000 jobs Each job requires 1/2 hour at £35.00 per hour =	£17.50
Set up	48,000 orders require 200 set ups i.e. 240 orders per set up Cost per set up is £750.50 Thus cost per order = £750.50/240=	£3.13
Preventative/ Repairs	Both based on machine hours Total cost = £6.58 + £3.62 = £10.20 per hour x 1/2 hour per job =	£5.10
Materials Handling	1,040 deliveries for 48,000 orders Cost per order is £250 Cost per job = £250/48000 x 1,040 =	<u>£5.42</u>
Total		<u>£31.15</u>
Overhead cost per telephone order	= £31.15 + £10.50	= £41.65
Overhead cost per internet order	= £31.15 + £5.25	= £36.40

(ii)

The key idea of Activity Based Costing (ABC) is that overhead costs are caused by activities. This means that costs should be analysed into groups (which are referred to as cost pools). Each cost pool should have a unique cause (referred to as a cost driver). By calculating the cost per unit of cost driver, and measuring the usage of each cost driver by each unit of output, it is possible to calculate the cost of each unit of output more accurately.

The major drawback is that the calculations are more complicated than the simple 'cost per machine hour' basis you are currently using. From the above calculations, the overhead cost of an average job using the current approach is £37.71. Using an ABC approach this is overestimating the overhead cost for orders received over the internet, and underestimating the cost of telephone orders.

This is not a major issue with regard to internet orders as the overestimate of cost is £1.31 per order. This is less than 4% of the overhead cost, and is therefore likely to be insignificant in the context of the total cost. The underestimate of the cost of telephone orders is more significant as it is almost 10% of the overhead cost. In theory, there is a danger that this could lead to selling prices being understated. This

could result in a reduction in profit margins. However, this is unlikely to have a major impact on the final price quoted to the customer.

The major reason that there is not a significant difference in the overhead cost under each method of calculation is that £1,084,900 or 60% of total overheads appears to be driven by machine usage. One possible approach is to continue to calculate the overhead cost of jobs on the basis of a cost per machine hour of £84 and to allow a discount of £5 per order for orders made via the internet.

3P9 Industrial Economics, Strategy and Governance

Exam Crib Lent 2012

Section C

5 (a)

$$P = 2000 - X/4 = 2000 - Q_1/4 - Q_2/4$$

$$TC_1 = 9000 + 200Q_1$$

$$TC_2 = 8000 + 100Q_2 + 2Q_2^2$$

Cournot model: Each firm maximises its profits on the assumption that the other firm's output is fixed, indicate that the derivative of $dQ_1/Q_2 = 0$ and $dQ_2/Q_1 = 0$.

$$\text{Profit}_1 = P \cdot Q_1 - TC_1 = (2000 - Q_1/4 - Q_2/4) \cdot Q_1 - 9000 - 200Q_1$$

$$d(\text{Profit}_1)/dQ_1 = 1800 - Q_1/2 - Q_2/4 = 0$$

$$Q_1 = 3600 - Q_2/2$$

$$\text{Profit}_2 = P \cdot Q_2 - TC_2 = (2000 - Q_1/4 - Q_2/4) \cdot Q_2 - 8000 - 100Q_2 - 2Q_2^2$$

$$d(\text{Profit}_2)/dQ_2 = 1900 - Q_1/4 - (9/2)Q_2 = 0$$

$$Q_1 = 7600 - 18Q_2$$

$$\text{Solving for } Q_2 : (35/2)Q_2 = 4000$$

$$Q_2 = 229$$

$$\text{Substituting for } Q_1 : 3600 - Q_2/2 = 3600 - 114 = 3486$$

$$\text{Total quantity produced} = Q_1 + Q_2 = 3715$$

$$\text{Price} = P = 2000 - Q_1/4 - Q_2/4 = 2000 - 928.75 = 1071.25$$

$$\text{Profit}_1 = 1071.25 \cdot 3486 - 9000 - 200 \cdot 3486 = 3,028,177.5$$

$$\text{Profit}_2 = 1071.25 \cdot 229 - 8000 - 100 \cdot 229 - 2(229)^2 = 109,534.25$$

5 (b)

Assume that firm 2 knows what firm 1's reaction function is, as per the question under the Stackleberg model, therefore this can be substituted into the profit for firm 2.

$$\text{Profit}_2 = (2000 - Q_1/4 - Q_2/4) \cdot Q_2 - 8000 - 100Q_2 - 2Q_2^2 \text{ and } Q_1 = 3600 - Q_2/2$$

$$\text{Profit}_2 = (1100 - Q_2/8) Q_2 - 8000 - 100Q_2 - 2Q_2^2$$

Maximise firm 2's profits

$$d(\text{Profit}_2)/d Q_2 = 1000 - 4.25Q_2 = 0$$

$$Q_2 = 235.3$$

$$\text{Reusing firm 1's reaction function } Q_1 = 3600 - Q_2/2 = 3482.4$$

$$\text{Price} = P = 2000 - Q_1/4 - Q_2/4 = 2000 - (3482.4 + 235.3)/4 = 1070.6$$

$$\text{Profit}_1 = 1070.6 \cdot 3482 - 9000 - 200 \cdot 3482 = 3,022,429$$

$$\text{Profit}_2 = 1070.6 \cdot 235 - 8000 - 100 \cdot 235 - 2(235)^2 = 109,641$$

	Cournot	Stackleberg
Price P	1071.3	1070.6
Firm 1 quantity Q₁	3486	3482
Firm 2 quantity Q₂	229	235

5 (c)

Key assumptions behind a perfectly competitive market –

- Large number of consumers and producers each with insignificant share of the market
- Each company too small to affect price through changing supply – everyone is a price taker
- All the companies produce homogeneous products that are perfect substitutes for each other (or at the very least consumers perceive them to be perfect substitutes)
- Consumers have perfect information about prices and sellers
- All firms have equal access to resources
- No barriers to entry and exit of firms

These assumptions rarely hold, as markets will have varying levels of concentration and therefore price setting power, companies actively seek the reality of the perception of differentiation (e.g. via marketing), consumers may not have the time or resources to acquire knowledge about all sellers, and initial endowments and previous actions will mean companies will differ in their access to resources.

Examples where the assumptions almost hold include foreign exchange trading, stock exchanges and in some cases eBay.

Comments: Students mainly took the direct route to the answer in parts A and B and were either correct in their workings, or had calculation errors along the way. There were a small number of students who in essence worked from first principles and instead of maximising profits, took marginal revenue equal to marginal cost, which is a longer way around the answer. Points were lost by students not being clear on assumptions or conditions that allowed them to remove terms and through calculation errors.

In part C Many students did not list the complete set of assumptions for a perfectly competitive market, some added new assumptions which were misleading and in many instances incorrect, and the discussion of when they hold or not was generally unstructured.

6 (a)

Show the definition of the HHI as being the sum of the squares of the market shares and recognise that the market shares shown are less than 100% - assume all other firms have market share lower than 1%.

Indicate that the basic levels of concentration are up to 1000 as unconcentrated, 1000 to 2000 moderately concentrated, and above 2000 as highly concentrated (a small number of students used the US guidelines at this point).

Calculate the HHI, showing working, and note that for this industry it is 812 and so currently is unconcentrated.

6 (b)

Two criteria to consider for the merger – post merger HHI and the change in HHI from pre to post merger.

Post merger HHI = 1,052

Change in HHI = 240

Based on the accepted criteria for the UK with a post merger HHI between 1,000 and 2,000 and a change in HHI of below 250, this merger would be allowed if the decision were a procedural one based on these numbers alone.

This merger might be allowed, due to the borderline nature of the post-merger HHI, in order to allow for the development of new pharmaceuticals which would have significant benefit to the population, or if there were distinct capabilities that the firms held which were complementary and would again allow for the development of new treatments which would be faster, at lower cost, or address the needs of disease groups which had not yet been addressed.

However, the merger is likely to not be allowed if there is perceived to be a lessening of competition, either through unilateral effects (removing the rivalry between two competing firms), coordination effects (allowing firms to increase prices) or vertical effects (allowing one firm to use its market power).

A good answer should emphasise that the HHI criteria for mergers are guidelines only, regulators have to take the specifics of the merger into account. Students who took the question further might comment on how the guidelines are different in the USA and that this would have been considered to be a safe merger with an unconcentrated market even after the merger.

6 (c)

Alternative concentration measure is the Concentration Ratio, which measures the cumulative market share of the largest r firms, where r is an arbitrary number.

Criteria that concentration measures should meet (Hannah and Kay criteria) are –

- Concentration curve ranking: a concentration index should rank an industry as more concentrated than another if its cumulative concentration curve (from the smallest to the largest firm) lies everywhere below the concentration curve of the other
- Sales transfer: A transfer of sales from a small to a large firm should increase concentration
- Entry condition: Addition of a small firm should decrease concentration, and conversely the exit of a small firm
- Merger condition: Merger of two or more firms should increase concentration

The Concentration Ratio does not meet the Hannah and Kay criteria explicitly, as it depends on whether the sales, entry or merger involves one of the r largest firms, so the HHI is technically more appropriate. However, the Concentration Ratio is easy to calculate and to understand, whereas the HHI is much harder to calculate in practice as it requires information on all of the companies in the given industry.

Comment – students did not in the main provide the criteria for the concentration measures, and gave very brief answers emphasising the ease in collection and use for the Concentration Ratio but not delving any deeper.

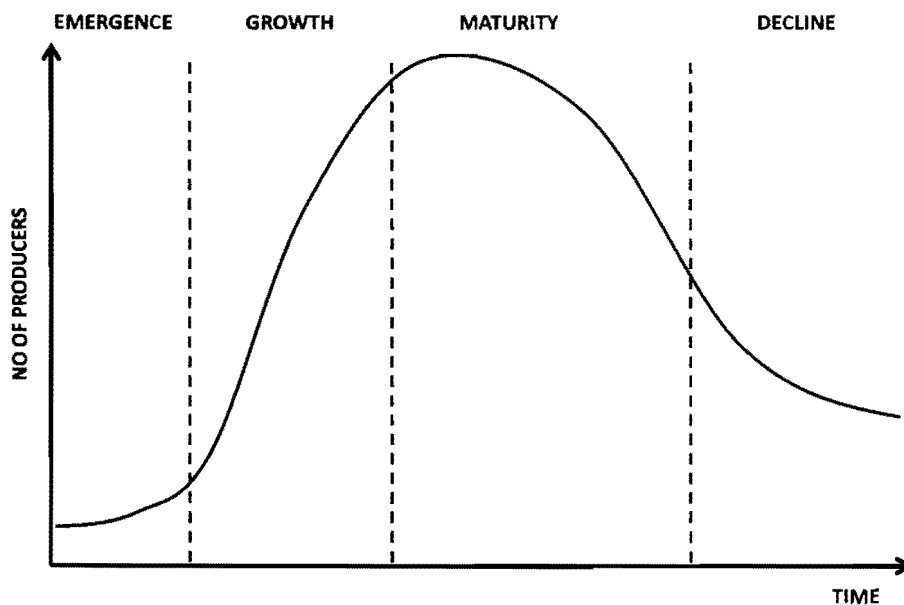
Section D

7 (a)

Industry lifecycle model

Based on the number of producers in a given industry, looks at how the industrial structure changes over time, show the basic stages of development (or emergence), growth (and shakeout if desired), maturity, and decline.

COMMENT: A number of students wrote the Y-axis as the size of the market in one way or another, which is not how this model works, it is based on the number of producers



Good answers would comment on how the model says very little about the processes that drive such a lifecycle, rather is descriptive of what appears to occur as industries discover dominant designs and standard products start to appear.

How conditions change through the industry lifecycle

Industry Life Cycle				
Industry structure	Many companies entering and exiting, low overall number of	Significant growth in number of producers, more stability in terms	Shake out of the industry beginning, number of producers	Number of producers falls off, very few if any new companies,

	producers	of companies	stable	focus moving to new/other industries
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A strong answer would take each of the stages and describe these main points, showing where the main contrasts are stage to stage.

COMMENTS –

Many students dealt with this question well but where the majority of students went off track was by trying to tie in other models (such as the Gartner hype cycle) which complicated their answer and tended to make them claim things that are not within the basic model of the industry lifecycle as requested.

Many students did not clearly discuss how at the early stages of the industry there are many firms entering and exiting, leading to an overall low number of producers but with many movements into and out of the industry.

Finally, the notion of dominant design was not present in many answers, as a key to the point when standards emerge and consolidation of producers occurs.

7 (b)

i) How a company's basis of competition might change

Looking for why the consumer buys from your company, and how that is related to the lifecycle, probably using VRIN as a basis for discussion.

Industry Life Cycle				
Industry dynamics	Lots of differentiation, low barriers to entry, innovation and technical competencies key	Significant growth, still relatively low barriers to entry, management of growing companies key	Low stable growth, standard products, high barriers to entry	Mainly price competition from remaining companies, consolidation occurring as well as high exits

COMMENT: Here and through the next section many students used many or all of the different frameworks presented in the strategy lectures, even if they were not applicable in this context. This showed a lack of understanding of how to apply each and meant answers were unclear.

ii) *How a company's strategic positioning might change*

A simple approach to this part of the question would be to take Porter's generic strategies (or the strategy clock) and discuss for each stage what might be the best strategic position to take.

Industry Life Cycle				
Company strategic goals	Acquire a market position	Build market share	Defend market share and build brand & margin	Milk all remaining profits, exit.
Competition	Entry of early competitors	Many competitors but numbers fall as growth slows	Porter- type competitive environment	Pressure from alternatives, competition falls.

7 (c)

As an industry comes to the end of its lifecycle the company is faced with three basic options –

- Extract as much profit from the existing industry without attempting to re-invest and revitalise the industry
- Search for the new technologies and processes that might renew the existing industry (for example, within the mature automotive industry to look at alternative fuels or electric battery solutions in order to reuse the existing industry's structure
- Search for products and services in other industries (emerging or not) to which the company could transition and effectively compete on

A strong answer would show these options and discuss why a company would choose one or more of these options at the end of the lifecycle.

COMMENTS: Answers on this part of the question ranged from three lines to two pages, as students either didn't provide detail or searched for what the correct approach was. Overall, answers were broadly in line with the options outlined above, but few students covered off the options and their trade offs well.

8 (a)

Outline of PESTEL

This should include the six categories (Political, Economic, Social, Technological, Environmental, Legal) and note that this is a model intended to capture the environment in which a company operates, providing a comprehensive list of possible influences on the success or failure of strategies.

Example PESTEL for the UK pharmaceutical industry

Political – Strength of the concept of the National Health Service within the UK, lack of IPR protection in some developing countries leading to difficulties in export markets

Economic – healthcare spending as proportion of government expenditure rising, pressure to reduce the cost of healthcare

Social – increasing number of elderly, increase in the rates of 'lifestyle' diseases e.g. type II diabetes, rising expectations of healthcare providers to always have a treatment option

Technological – short/empty pipelines, very high cost of drug development

Environmental – use of 'natural' remedies/patenting of traditional knowledge contentious

Legal – drugs coming off patent and the threat of generics, continued regulation of production and the cost and complexity of running clinical trials

At the end of the PESTEL list students should provide a brief summary on how they believe the different elements interrelate, for example the positive of having a single buyer in the NHS but the complication of having to deal with a large bureaucracy or the potential growth in market due to aging but the lack of treatments/devices coming to market due to failures of development.

8 (b)

Impact of personalised medicine on PESTEL for the pharmaceutical industry

- P: Increased risk of disease based politics, selection/adverse effects of genetic information on an individual basis being used negatively e.g. insurance
- E: Potentially further increases the cost of healthcare
- S: Rising expectations of treatment and cure based on new approach
- T: Refreshes the industry product portfolio, but introduces/demands new capabilities in genetics that some pharmaceutical companies will not have, as well as a different production and delivery structure (batches of one, locally produced)
- E: Possibly reduces environmental impacts due to lower transport activity (producing at the patient)
- L: Will require new regulation, uncertainty as that regulation is being developed

A strong answer here would have taken each of the categories and discussed how it might differ from that provided in section (a) highlighting where there are significant changes in opportunities for a company.

8 (c)

The most important contrast between PESTEL and Five Forces is that the former focuses on the macro environment in which the company operates whereas the latter looks much more closely at the industrial dynamics between the company, its suppliers, competing firms, and consumers. Using PESTEL can be simple and quick, although subjective in the sense of the information that is collected and used, providing a rough sketch of the position of the company within its macro context. However, it will miss detailed issues which should arise under the Five Forces model. However, Porter's approach can be seen as a very long laundry list of issues to consider and so to use Porter effectively companies should quickly prioritise the

Comments: As a more descriptive/qualitative question students were able to get into the question and provide an answer. Where a number fell down was in not providing any summary/commentary on lists of PESTEL factors or in some cases not using the PESTEL structure to their advantage, just discussing the sector in general. For the final piece, some student were confused on which scales each operated, but a number provided very strong answers showing how to potentially blend the best and worst of PESTEL and five forces.

ENDS