Answers

Section A

1 C

The role of the external auditor is defined in the Companies Act as expressing an opinion on whether or not the financial statements give a true and fair view.

2 D

This is the definition of a loss provided in the Statement of Principles for Financial Reporting.

3 D

The accruals principle requires the company to recognise the cost in the period in which it was incurred. Therefore, costs must be increased and the liability to pay the fees will be included in the balance sheet.

4 A

By reporting the gains in the financial statements, the directors are recognising them. However, it should be noted that only the profit on the sale of the machine has been realised.

5 D

The restructuring cost is material, representing more than 25% of the reported profit. FRS 3 defines exceptional items as material items which derive from events or transactions within the ordinary activities of the business and which need to be disclosed separately if the financial statements are to give a true and fair view. The standard requires three categories of exceptional items to be reported on the face of the profit and loss account **after** operating profit. These are:

cost of a fundamental reorganisation or restructuring
profit or loss on the sale of fixed assets
profit or loss on sale or termination of an operation.

All other exceptional items should be allocated to the appropriate heading in the profit and loss account, and disclosed by way of a note to the financial statements.

Consequently the restructuring cost should be reported on the face of the profit and loss account after operating profit. This will increase the operating profit by £85,000.

The restatement of stock is an example of a correction of a fundamental error, which is one of two reasons for treating an item as a prior period adjustment (the other being a change in accounting policy). As the opening stock was overstated, the resulting adjustment is a charge. However the charge should be a prior period adjustment and should therefore be removed from the calculation of the current period's operating profit. This will increase the operating profit by £42,000.

Thus the correct operating profit is : £325,800 (as reported) + £85,000 (exceptional item) + £42,000 (prior period adjustment) = £452,800.

6 B

The depreciation charge in the first year on both the reducing balance and straight line bases is £22,000. Using the reducing balance basis, the charge in subsequent years is calculated on the net book value. In the second year, this leads to a charge of £16,500, or a reduction of £5,500. This increases the reported profit.

7 C

FIFO means that the stock is taken to include:

	all of the delivery on 28 Nov	300 kg at £60	=	£18,000
	part of the delivery on 19 Nov	130 kg at £52	=	£6,760
thus	Stock value			£24,760

8 B

As the fire occurred after the balance sheet date, it concerns conditions which DID NOT EXIST at the balance sheet date. As the stock destroyed represented 30% of the stock value, it would be considered material. For that reason, this is a NON ADJUSTING event, and the uninsured portion of the loss (£90,000) should be disclosed in a note, but no entry is needed in the profit and loss account.

9 A

at 30 November	NBV	£3,570,000
	TWDV	£2,450,000
	Timing difference	£1,120,000
	Provision required at 22%	£246,400
	Provision b/f	£250,000
	Thus reduction	£3,600 = credit to profit and loss

10 C

FRS 12 requires a provision to be recognised if, at the balance sheet date, an event has taken place which means that it is probable that a transfer of economic benefits will be required, and the amount of the transfer can be reliably measured. In this case, as the company secretary has accepted liability, it is clear that compensation will be paid at some point in the future. Although the customer has claimed £250,000 and the company has offered £100,000, the best estimate will be the amount estimated by the legal representatives, i.e. £150,000.

11 C

Current selling price	£30
Current variable cost	£17
Current contribution	£13
Sales volume	25,000
Total contribution	£325,000 (25,000 x £13)
Fixed Costs	£250,000
Profit	£75,000 (£325,000 – £250,000)
New contribution	£10 (£27 – £17)
Target profit	£82,500 (£75,000 + 10%)
Target contribution	£332,500 (£82,500 + £250,000)
Sales volume	33,250 (£332,500 ÷ £10)

12 D

As the material which is currently in stock could be used in the ongoing production process, the relevant cost is the replacement cost.

13 D

If staff have been trained in material handling, they will be more efficient in this activity, leading to improved productivity.

14 C

The divisional profit is £1·2m x 30%	=	£360,000
Imputed interest is £1·2m x 13%	=	£156,000
Thus, residual income	=	£204,000 (£360,000 – £156,000)

15 D

The main aim of Activity Based Management is to improve efficiency, which is wider than just cost management. ABM also includes a consideration of quality and lead times. Although ABC *may* be part of an ABM programme, it is not necessary to actually implement ABM.

16 C

The maximin decision rule seeks to maximise the minimum payoff from the possible outcomes. In this case the minimum outcome for each project arises if market demand is weak. The highest outcome in the event of weak demand is the £47,000 result from project C.

17 B

OPT seeks to achieve maximum throughput at the same time as minimising stock levels, and does so based on the known constraints of the process.

18 B

Market skimming uses high prices to maximise the unit profit in the early stages of the product life cycle. This is likely to encourage competitors to enter the market, rather than discourage them. Also, if demand is not known, it will be more beneficial to charge high prices and reduce them if demand is insufficient.

19 A

EVA® calculates the value added by the business without the constraints of accounting policies or standards. Consequently, charges for R&D and Operating Leases which are based on the company's accounting policies should be removed from the calculation of NOPAT. (Candidates should note that these charges are replaced by standard amortisation charges.)

20 C

	Machining	Assembly
Variable Cost p.u.	£6	£4
Transfer cost p.u.	£15	£15
Selling Price p.u.		£26
Contribution p.u.	£9	£7 (£26 – (£4 + £15))
x120,000 units =	£1,080,000	£840,000
less Fixed Costs	£525,000	£350,000
Profit	£555,000	£490,000

Section B

1 To Commercial Director
From Financial Director
Ref Operating and Financial Review/Five Year Review
Date 6 December 2004

Terms of Reference
This report considers the main features of the Operating and Financial Review (OFR) and the Five Year Review, the benefits these provide to the users of financial statements, possible improvements to enhance their usefulness and whether the financial reporting of unlisted companies could be improved by their inclusion in the financial statements.

Introduction
It should be noted that these reports must be included in the financial statements of listed companies, but are not required for unlisted companies. This explains why neither have been included in the financial statements in previous years.

(a) Operating and Financial Review
The overall purpose of the OFR is to allow the users of the financial statements to assess the potential of the business. The OFR achieves this by requiring the directors to discuss and analyse both the performance of the business and the factors which influence business performance.

The following guidelines for preparation of the OFR are intended to ensure that the review achieves that over-riding purpose:
- Only relevant matters should be included. This provides a focus for the users, and means that the report is succinct.
- The report should be written so that it can be understood by general readers. In other words, any jargon or technical terms should be explained, so that the reader is not expected to have any specialist knowledge.
- Objectivity is important. There must be a balanced treatment of both positive and negative influences on performance.
- To provide continuity, any observations or assertions included in previous reports which were later proved to be unfounded, should be referred to.
- Whilst some numerical analysis is inevitable, the review must also include analytical discussion.
- The overall business context should be used as the setting for discussion of particular aspects of performance.
- As one of the most difficult aspects of assessing business performance is identifying influential trends, the review should highlight any changes in trends. (i.e. those which are not expected to continue to be influential and those which are expected to be influential in the future.)
- As the title suggests, there are two distinct sections to the OFR – the Operating Review and the Financial Review.
- Possible content of each section would include:
  (i) Operating Review
  Operating results
  Profit
  Recognised gains and losses
  Dividends
  Earnings per share
  Accounting policies
  Planned investments
  (ii) Financial Review
  Capital structure
  Treasury policy
  Funding
  Liquidity
  Consideration of going concern
  Reliability of balance sheet values

From these points it can be seen that the OFR is likely to be of considerable benefit as it effectively changes the dynamics of the communication process. The onus is on the company to communicate clearly and not to assume any specialised knowledge on the part of the reader. This is contributing towards the trend of making financial reporting more inclusive, and rendering specialist knowledge less important. All of this should help to ensure that business performance is more transparent and that users are better informed.

In simple terms, it might be said that the OFR is an important part of achieving the objectives set out in the Statement of Principles for Financial Reporting. This identified the qualities of useful financial information as being:
relevance
reliability
comparability
understandability

(b) Five Year Review

Without the five year review, the information available to users of financial statements is restricted to two years. It is universally accepted that a meaningful analysis of financial performance requires an assessment of trends over a longer period.

By providing information over a longer period, the five year review clearly assists users.

In particular, users are now able to:

assess trends
assess performance in the context of a longer period
carry out a more in depth analysis.

This means that it is more likely that users will be able to identify trends and assess their effect. Of course, it should be noted that another important aspect of assessing performance is the ability to identify the point at which the underlying factors which influence performance have changed, or the point at which new influences emerge. For this reason, the interaction of the Five Year Review and the OFR is important. (As discussed above, such changes in trends must be highlighted in the OFR.)

Although the five year review will include profit, net assets and capital, there is no set layout. This means that while comparison from one period to another is facilitated, comparison between companies is not always straightforward. Therefore one possible improvement would be to require the review to follow a set layout, as a means of facilitating comparison from one company to another.

(c) Application to all companies

The discussion above indicates that users of financial statements are likely to find the OFR and the five year review beneficial. This raises the question of whether these should be required reports for all companies, rather than just listed companies.

In considering this question, we need to remember that whilst the trend towards more transparent financial reporting is generally welcome, any additional requirements place additional burdens on companies. This may not be a major problem for large companies, as the reporting requirements are well known and can therefore be included in the decision making process when a listing is being considered. However there is evidence that many small companies find regulatory compliance to be a considerable burden. Therefore it is necessary to find a balance between usefulness and cost. In a sense this is a cost benefit analysis. The need to comply with additional regulation will impose a cost on companies, and the resulting benefit must be assessed.

It is also worth noting that in most small companies, the owners are involved in the day to day running of the business. This means that there is less emphasis on the needs of external users of financial statements.

In the case of large companies, the reliance on external providers of finance means that there is an obligation to ensure that they are properly informed.

It should be noted that improved regulation on its own does not automatically lead to transparent and reliable financial reporting. High profile corporate collapses in the USA and Europe which have been linked to improper accounting practice over a relatively long period show that if senior managers are determined to mislead users of financial statements, they will do so.

On balance therefore it could be argued that regulation has a part to play, but it is unlikely that one solution can be applied to all companies regardless of size or management structure.

Marking scheme:

(a)	1 mark for each feature of the OFR, to a MAXIMUM of	8	
	2 marks for each benefit to users, to a MAXIMUM of	4	12
(b)	1 mark for each valid point, to a MAXIMUM of	2	
	2 marks for suggesting an appropriate improvement	2	4
(c)	1 mark for each valid point, to a maximum of		4
			20

Marks

2 (a) Flowline Ltd
Cash Flow Statement for year ended 30 November 2004

	£		
Net cash inflow from operating activities	34,756		
Servicing of finance	(6,000)	(working 3)	1
Taxation	(25,700)	(working 4)	1
Capital expenditure	(11,000)	(working 5)	1
Equity dividends paid	(9,000)	(working 6)	1
Net Cash Flow before financing	(16,944)		
Financing	nil		
Decrease in cash	(16,944)		1

Note 1 Reconciliation of operating profit to net cash flow from operating activities

	£		
Operating profit	41,771	(working 1)	2
Depreciation	15,800	(per question)	1
Increase in stocks	(12,764)	(working 2)	2
Increase in debtors	(18,547)	(working 2)	2
Increase in creditors	8,496	(working 2)	2
Net cash inflow from operating activities	34,756		1
			15

Working 1 Operating Profit

		£		
	Retained Profit 2003	345,496		
	Retained profit 2004	367,267		
thus	Retained profit for year	21,771		1
Add	Taxation charge	9,000		
	Interest charge	6,000	for all three	1
	Dividends declared	5,000	adjustments	
		41,771		2

Working 2

	2004 £	2003 £	movement £	
Stock	97,593	84,829	12,764	(inc. ∴ outflow)
Debtors	176,041	157,494	18,547	(inc. ∴ outflow)
Creditors	137,065	128,569	8,496	(inc. ∴ inflow)

Working 3 Interest paid

		£
	Provision at 30.11.03	3,000
	Profit and loss charge	6,000
		9,000
	Provision at 30.11.04	3,000
=	Amount paid	6,000

Working 4 Taxation

		£
	Provision at 30.11.03	25,700
Add	Profit and loss charge	9,000
		34,700
Less	Provision at 30.11.04	(9,000)
=	Amount paid	25,700

Working 5	Capital expenditure		£	
		NBV at 30.11.03	853,962	
	Less	Depreciation for year	(15,800)	
			838,162	
		NBV at 30.11.04	849,162	
		Difference	11,000	= Additions

Working 6	Equity dividends paid	£
	Provision at 30.11.03	9,000
	Profit and loss charge	5,000
		14,000
	Provision at 30.11.04	5,000
	= Amount paid	9,000

(b) As the directors have noted, the company's cash position has deteriorated by £16,944 over the past year. This is particularly disappointing in light of the fact that an operating profit of £41,771 was earned.

Perhaps the first point which can be noted from the cash flow statement is that although there was an investment of £11,000 in fixed assets, this was entirely funded from the cash generated by operating activities. While this may be appropriate as the amount of cash generated by operating activities (£34,756) was quite healthy and the capital expenditure was modest, when combined with other factors, the lack of additional external finance has contributed to the cash deficit.

If lease or hire purchase finance had been raised for the capital expenditure, the cash deficit would have been considerably reduced.

By looking more closely at the detail of the cash flow statement, and in particular Note 1, the Reconciliation of operating profit to net cash flow from operating activities it can be seen that the significant increases in the level of stock and debtors have been the major reasons for the cash deficit. Financing these increases has required just over £31,000 of cash. Clearly if these increases had been avoided, the cash position would be significantly better.

Of course, this raises the question as to whether these increases were necessary. Given that there has also been an increase in the amounts owing to creditors, there is some evidence that the company is expanding through increased sales. It would be wise to consider the level of working capital in context, by calculating the stock holding period, and the debtors and creditors payment periods.

If the increases are due to a planned expansion, it may be that the original objective of creating cash was not realistic. This suggests that the company's planning procedures lack integration, and that decisions in one area (e.g. increased sales activity) do not feed into other decision making processes (e.g. cash forecasting).

Of course, the fact that cash has been consumed will not be a major problem in the following circumstances:
- If there is sufficient working capital finance available through an existing overdraft facility.
- If the growth in stock and debtors are the result of a planned expansion in sales.

A final point to note is that the significant cash outflow in respect of the tax liability is based on last year's profits. Therefore the company's cash flow has been affected by an item which relates to the previous year's financial statements. This underlines the fact that careful planning is needed to ensure that in time of profitability, cash is not used in the short term without having regard to the need to meet the tax liability in the future.

Therefore the following action is suggested:
- consider arranging finance for future capital expenditure
- review existing overdraft and loan limits
- integrate the forecasting procedures to ensure that all decision are included
- review stock holding policy and systems for managing flow of stock
- review procedures for managing debtors
- negotiate longer credit period from main suppliers
- ensure that the tax liability is foreseen and included in cash forecasts

Mark allocation:
1 mark for each issue noted from the cash flow statement
1 mark for each valid suggestion for action
to an overall MAXIMUM of 5

20

					Marks
3	**(a)**	**(i)**	Goodwill on acquisition		
			Net assets of Ameor at date of acquisition	£750,000	$^1/_2$
			x 30% = Net assets acquired	£225,000	$^1/_2$
			Cost of shares	£290,000	$^1/_2$
			Goodwill on acquisition	£65,000	$^1/_2$
					2
		(ii)	Amortised over five years		
			Thus annual amortisation = £65,000 ÷ 5 =	£13,000	1
			Thus unamortised at 30 November 2005 =	£52,000	1
					2

(b) (i) In the financial statements of Harbinger plc:
Fixed assets will include a long term investment at the cost of £290,000.
Tutorial note:
It is permissible to value the investment at market value, so the carrying value may be increased in the future.
It should be noted, however, that whilst reflecting an increase in value is a matter of choice, any fall in value below cost must be reflected in the carrying value.

Mark allocation:	Fixed assets increased	1
	Investment at cost	1
		2

(ii) In the consolidated financial statements:
The equity method of consolidation should be used. This is sometimes known as the 'one line' method.

This term is used as the value of the net assets in the associated company is reported on a single line on the balance sheet. The value of the other assets and liabilities is not affected. The value shown is the group share of the net assets, plus the unamortised goodwill. Capital and reserves will be increased by the inclusion in the profit and loss account of the group share of the retained profit of the associated company, less the goodwill amortised to date.

Therefore the balance sheet will include the following items:

Investment in Associated undertaking	£301,000	3
as the cost of the investment	£290,000	$^1/_2$
will be cancelled out, the net increase will be	£11,000	$^1/_2$
		4
The profit and loss account will also be increased by £11,000		2

Workings:

Investment in Associate:		
Net assets at date of acquisition	£750,000	
Estimated Profit	£80,000	
Estimated net assets 30.11.05	£830,000	$^1/_2$
Group share (30%)	£249,000	$^1/_2$
Unamortised goodwill	£52,000	1
Balance Sheet value	£301,000	1
		3
Profit and Loss Account:		
Retained profit for year	£80,000	
Group share (30%)	£24,000	$^1/_2$
less Goodwill amortised	£13,000	$^1/_2$
Balance sheet value	£11,000	1
		2

Marks

(c) If the investment gave rise to control, the accounting treatment would differ as follows:
the investee would be a subsidiary undertaking
consolidation accounting would be used
this would mean that on the consolidated balance sheet:
- the value reported for each asset and liability would be the total of the value of that asset or liability for the investing company and the investee
- unamortised goodwill would be reported as a specific asset
- as the total value of the net assets of the investee are consolidated, it is necessary to report the extent to which the net assets are controlled outside the group. This is done by including the value of minority interest as part of the consolidated capital and reserves.

Mark allocation: 2 marks per valid point, to a MAXIMUM of — 8

— 20

Section C

4 (a) Bonus based on profit

The most obvious benefit of using profit as the sole criterion for the calculation of a bonus is that for any commercial organisation, profitability will be an important objective. By basing the bonus on profit, managers and staff will tend to be motivated to take action which will improve profitability. By seeking to achieve a personal goal (a bigger bonus) managers and staff will be contributing to an important overall business goal.

In addition, as the financial statements are subject to audit, there will automatically be an external check on the accuracy of the figure which forms the basis of the bonus calculation.

Finally, the calculation of the bonus will be fairly simple.

However, using profit is not without its drawbacks.

One obvious point is that while, as discussed above, profit is often considered to be an understandable measure, there is a need to ensure that the definition of profit is clear and agreed. For example, there may be a considerable difference between operating profit and profit before tax as a result of interest charges. Managers and staff may feel that they can have little influence over interest costs, and may be aggrieved if they feel that such costs are leading to a reduction in the amount they can earn by way of bonus.

Interest costs are a particular example of what could be the biggest problem in ensuring that the bonus scheme achieves its overall objective of motivating staff. If the amount on which the bonus is calculated includes costs which staff are unable to influence, there is a possibility that staff will not feel ownership of the scheme. Indeed, such costs may mean that the bonus scheme could have a negative effect on motivation and performance.

To be effective, a bonus scheme should ensure that the benefits and performance are clearly and demonstrably linked. As profit is an overall measure, there may be a problem with some staff perceiving that their good performance is being wasted by problems elsewhere in the organisation. In Oxbrary's case for example, a particular site or division may perform poorly, but staff will still earn a bonus, based on overall profitability. On the other hand a site or division may perform to a high standard, but the bonus will be reduced due to poor performance in another site or division. Either of these situations will have an adverse effect on motivation and future performance.

A further problem is that profit may be susceptible to short term manipulation. Managers may take action to defer benefits once their bonus has met their personal target. This may not be to the overall benefit of the company.

The inclusion of a wider range of variables may overcome some of these problems, but will mean that some of the benefits will tend to be dissipated.

Overall, it may be that the simplicity of a profit based calculation is more apparent than real.

A final point which ought to be made is that using profit as the sole basis of the calculation, may be useful in the short term, but may need to be reconsidered if the bonus scheme is to remain effective. The short term benefit may arise by providing a tangible link between outcomes and rewards, and therefore encouraging a result oriented culture. Once this has been achieved, however, there may be a need to refine the calculation to ensure that performance and rewards are directly linked.

Mark allocation: 1 mark per valid point to a MAXIMUM of **8**

(b) Types of incentive scheme

Group bonus scheme

In this type of scheme, the bonus is based on the performance of an identifiable group of staff. In Oxbrary's case this may be a site, a division, or a team at one of the sites. The benefit of this type of scheme is that the bonus is more clearly linked to the efforts of an identifiable group. This should improve motivation and make the scheme more effective. In addition, although profit is very often the measure on which the bonus is based, this need not be the case. The target measure can be varied for different groups to ensure that corporate objectives are achieved. For example, the bonus for the outbound division could be based on appointments arranged or sales achieved.

Range of targets

All the discussion so far has been about bonus schemes with a single objective. To reflect the complexity of the business environment, a bonus scheme may be based on a number of targets. These may be combined into a single measure, (perhaps through an index) or the bonus may have a number of elements.

The key advantage of such an approach is that the recipient of the bonus is encouraged to manage a number of factors to ensure that business performance is not being neglected in any specific area in order to achieve a separate target which is related to the bonus. This should improve overall, long term performance.

As was suggested in the discussion of the group bonus scheme, it is often appropriate to include some non-financial targets in the bonus calculation.

For example in the case of the inbound division, an element of the bonus could be based on a customer satisfaction index which measures the extent to which customer enquiries or complaints are successfully handled.

Mark allocation: 1 mark for each type of scheme identified, and
1 mark for each benefit discussed to a MAXIMUM of **6**

(c) Potential problems

The key problem of introducing a bonus scheme is achieving the overall objective of such a scheme, namely to reward performance which contributes to achieving corporate objectives. This may be done by basing the bonus on corporate, group or individual measures.

This key problem has a number of facets:

- Ensuring that the chosen target(s) is/are appropriate
  It is necessary to ensure that corporate performance will actually be improved if the performance target is met. For example if the outbound division is successful in arranging appointments, it is essential that the resources exist to follow up on these appointments. Consider a client offering property improvements to customers. If a large number of appointments are arranged, there may be a delay in completing the quotation the customer will need to make a decision. This may lead to dissatisfied customers and a loss of reputation.
- Ensuring that rewards can be achieved
  While it may be possible to motivate staff by offering high levels of bonus payment, staff must feel that the level of performance which must be achieved to earn the payment is within their powers. For example, if the outbound division has been successful in achieving sales in a particular period, it is likely that the target sales level for the next period will be raised. The increase must be challenging, but achievable. There will be little to be gained from a 100% increase in the sales target, unless it can be clearly demonstrated that underlying factors provide the potential for such an increase to be achieved.
- Deciding on entry and cut-off levels
  Most schemes require a minimum level of performance to be achieved before any payment is made. This 'entry level' should be high enough to ensure that some effort is needed to achieve a bonus payment, but it should not be set unreasonably high.

  Equally a key decision is whether there should be a cut-off point. The argument for a cut off point is that unlimited bonuses may create a culture of greed. The argument against it is that if the targets lead to improved performance, shareholders will benefit. There is no artificial limit to shareholder benefits, and therefore there should be no artificial limit to the benefits available to staff who create shareholder benefits.
- Ensuring the rules are clearly understood
  Clearly if there is any ambiguity about the rules, staff may feel aggrieved, and motivation may be destroyed.
- Staff resistance
  The introduction of the scheme is likely to be met with a degree of resistance, as staff may feel threatened by change.

These problems are most likely to be overcome by sound management practices. Key among these is communication. The purpose of the scheme, the rules, the benefits, staff concerns must all be fully discussed and concerns alleviated. It almost goes without saying that the bonus scheme must provide an opportunity for staff to increase their personal income. There will be little enthusiasm for a bonus scheme which renders part of the existing reward package contingent on performance. Finally, there must be agreement that the targets are challenging yet achievable, that the rewards are worthwhile, and that the level of rewards can be influenced by the specific efforts of the individual or group.

Mark allocation: 1 mark for each problem identified, to MAXIMUM of	4
1 mark for each suggestion to overcome problems, to a MAXIMUM of	2
	6
	20

5 (a) Calculation of product costs using ABC:

Product	A	B	C	
	£	£	£	
Direct material per unit	55	67	98	
Direct labour per unit	41	54	57	
Overheads per unit:				
Machine costs	43·64	109·11	43·64	(W1)
Set up costs	45·58	85·46	106·83	(W2)
Material handling	25·38	9·52	152·31	(W3)
Total cost per unit	210·60	325·09	457·78	

Working 1 Machine costs

Product	A	B	C	Total
Machine hours per unit	0·6	1·5	0·6	
Budgeted production volume	600 units	400 units	200 units	
Total machine hours	360	600	120	1,080
Machine costs				£78,560
Cost per machine hour				£72·74
Cost per unit	43·64	109·11	43·64	

Working 2 Set up costs

Product	A	B	C	Total
Production runs in period	32	40	25	97
Set up costs				£82,900
Cost per set up				£854·64
Cost per unit	45·58	85·46	106·83	

Note to candidates:
The cost per unit is calculated as follows:
(£854·64 x production runs per product) ÷ production volume

Working 3 Material handling cost

Product	A	B	C	Total
Material deliveries	8	2	16	26
Material handling costs				£49,500
Cost per delivery				£1,903·85
Cost per unit	25·38	9·52	152·31	

Note to candidates:
The cost per unit is calculated as follows: (£1,903·85 x material deliveries per product) ÷ production volume

Mark allocation:

Identification of cost pools/cost drivers	3 x 1		3
Calculation of cost per unit of cost driver	machine costs		1
	set up		1
	materials handling		1
Calculation of cost per unit of output	3 x 2	=	6
			12

(b) To Managing Director
From Brumley Site Manager
Ref Activity Based Costing
Date 6 December 2004

(i) As requested, I have calculated the cost per unit for each of the products manufactured at the Brumley site. When the unit cost is compared with the selling price, the results are as follows:

	A	B	C
	£	£	£
Selling price per unit	300·00	530·00	435·00
Cost per unit	210·60	325·09	457·78
Profit/(Loss) per unit	89·40	204·91	(22·78)

From this it can be clearly seen that production of Product C should cease, as this product is unprofitable.

At first sight, product B appears to be the most attractive, yielding a unit profit of over £200. This seems to suggest that we should maximise our production of product B.

However, such an approach ignores the fact that machine hours are limited to 1,140 in each production period. This means that an assessment of which product is more favourable should be based on the profit per unit of limiting factor, rather than the profit per unit of output.

Carrying out such a calculation, we can see:

Product	A	B
Profit per unit	£89·40	£204·91
Machine hours per unit	0·6	1·5
Profit per machine hour	£148·98	£136·61

This means that Product A is preferable, and should be produced up to the maximum market demand. Product B should be produced only when demand for Product A is satisfied.

(ii) Other factors
Before implementing my recommendation to cease production of Products C and B, we should consider the following factors:

- Sales of each product may be interdependent. If sales of Product A can only be made along with sales of C in particular, it would obviously be counter-productive to cease sales of C.
- The interdependence of products from Brumley with products of other sites would also need to be considered.
- Cessation of a product, even if it is independent of the other products produced may result in a loss of customer goodwill, and sales could be adversely affected.
- Market demand should be confirmed to ensure that there are no factors which will lead to reduced sales volumes.
- The stage of each product in the product life cycle may affect the decision. If A is a mature product, there may be a declining market. Concentrating production on a mature product may mean that we are relying on a market which could soon disappear.
- It would also be prudent to review current practices to assess whether the cost structure of products B and C can be amended, leading to a reduction in unit cost.
- The accuracy of the results of activity based costing is entirely dependent on the use of appropriate cost drivers. If the cost drivers selected do not actually influence the total cost incurred, we will be making decisions based on inaccurate information. It is therefore essential that we are confident that the cost drivers have been correctly identified.
- It should also be noted that the analysis of costs in activity based costing assumes that all costs are amenable to control over the long term. If we are merely seeking to maximise short term profit, activity based costing is not an appropriate technique.

Only when we are fully satisfied on these points should production of C (and possibly B) cease.

Mark allocation:

(i)	Cessation of loss making product	1
	Cost per unit of limiting factor considered	2
	Products ranked on basis of limiting factor	1
		4
(ii)	1 mark per valid point, to a MAXIMUM of	4
		20

6 (a)

	February	March	April	May	June	July
Workings						
Days	22	22	22	22	22	22
Holidays			3	1		10
Chargeable days	22	22	19	21	22	12
No of staff (including Rodney)	9	9	9	9	9	9
Chargeable man-days	198	198	171	189	198	108
Contract days	25	25	25	25	25	25
Domestic days	173	173	146	164	173	83
Utilisation	70%	70%	80%	80%	90%	90%
Domestic days sold	121·1	121·1	116·8	131·2	155·7	74·7
Revenue generated:						
Contract (days x 7 x £18)	3,150	3,150	3,150	3,150	3,150	3,150
Domestic (days x 7 x £20)	16,954	16,954	16,352	18,368	21,798	10,458
Cash Flow:						
Contract			3,150	3,150	3,150	3,150
Domestic	16,954	16,954	16,352	18,368	21,798	10,458
Total	16,954	16,954	19,502	21,518	24,948	13,608
Wages:						
Administration	1,250	1,250	1,250	1,250	1,250	1,250
Staff	9,856	9,856	9,856	9,856	9,856	9,856
Rodney	1,694	1,694	1,694	1,694	1,694	1,694
Total	12,800	12,800	12,800	12,800	12,800	12,800

Budgeted Cash Flow

	February £	March £	April £	May £	June £	July £
Inflow – Sales	16,954	16,954	19,502	21,518	24,948	13,608
Outflows:						
Wages	12,800	12,800	12,800	12,800	12,800	12,800
Employment related costs (12%)	1,536	1,536	1,536	1,536	1,536	1,536
Leasing payments	13,500			13,500		
Rent	6,500					
Other overheads		1,500	1,500	1,500	1,500	1,500
Total Outflow	34,336	15,836	15,836	29,336	15,836	15,836
Opening cash balance	0	–17,382	–16,264	–12,598	–20,416	–11,304
Net In/(Out) flow	–17,382	1,118	3,666	–7,818	9,112	–2,228
Closing cash balance	–17,382	–16,264	–12,598	–20,416	–11,304	–13,532

Mark allocation:	
Appropriate layout for cash budget	2
Calculation of closing balance	1
Calculation of revenue:	
Contract	2
Domestic: inclusion of chargeable days	1
staff utilisation	1
calculation of revenue	1
Cash flow Contract	1
Domestic	2
Calculation of wages	1
Calculation of staff costs	1
Other cash flows (in total)	1
	14

(b) Dear Rodney

I have attached a copy of the cash budget I prepared, based on the assumptions we discussed. As you can see, although the proposed loan of £15,000 is sufficient funding by the end of the six month period, it will not provide sufficient funding during February, March and May. This means that some cash flows must be rescheduled within the six month period.

There are a number of ways this can be done. These are:

Pay rent on a quarterly basis

This would reduce your cash deficit at the end of the first and second months by £3,250 to £14,132 and £13,014 respectively. This would mean that the proposed loan would be sufficient, except at the end of May.

Reduce the credit period allowed to contract customers

If the credit period could be reduced to one month rather than two, your cash deficit at the end of May would be reduced by £3,150 to £17,266. Although this is helpful, on its own it does not mean that the loan is sufficient. Therefore there will be a need for additional action.

Defer leasing payments

There are two possibilities here.

If payments were made monthly in advance, as opposed to quarterly, approximately £9,000 of the payment due in May would be deferred until June and July. This would reduce the funding requirement to within the proposed limit.

Alternatively, as staff are not fully utilised in the early months, it may be possible to delay the leasing payments by delaying the acquisition of some of the equipment. If equipment which gives rise to quarterly payments of £2,266 can be delayed (as well as reducing the credit period to one month), funding would be within the proposed limit.

Factoring

If the amounts due from contract customers were factored, and a 90% advance was received, the resulting cash inflow would be £2,835 per month, commencing in February. This would reduce the funding requirement by the end of March by £5,670 to £10,594. The funding requirement at the end of May would also be reduced by £5,670 to £14,746. However it must be noted that the cost which would be levied by the factor may lead to an additional outflow.

Recommendation

Paying leasing rentals monthly is the only suggestion which on its own has sufficient impact to reduce the funding requirement to the desired level. It is also unlikely to be difficult to negotiate such a payment pattern with the leasing company. For those reasons, I would suggest that this is the action you should take.

Please let me now if you would like to discuss any of these matters.

Yours sincerely
A Candidate

Mark allocation:

Recognition that funding is sufficient by the end of the period, and that a rescheduling is required	1
For a valid suggested action, 2 marks, to a MAXIMUM of	4
For a clear final recommendation	1
	6
	20