
Answers

Section A

1 B

2 C

3 D

4 A

FIFO uses the most recent prices to value stock.
 As prices are falling, this will lead to a lower stock value.
 A lower stock value will lead to a shorter stock turnover period.

5 B

Distributable reserves are:	Retained profit	£1,360,000
	General reserve	£630,000
	Total	£1,990,000

6 C

Jamee has 1 million (£500,000 x 50p per share) shares in issue.
 Harvert holds 400,000 shares or 40% of the share capital.
 With a holding of 40% and one nominated director, it is virtually certain that Harvert can exercise a significant influence over the operating and financial policies of Jamee, but cannot exercise control.

7 B

As deferred tax is reported under the heading of Provision for Liabilities and Charges on the Balance Sheet, any increase will have no effect on the current assets and current liabilities.
 Therefore the current ratio will be:
 £275,000 : £210,000 = 1:31:1

8 B

The cash paid will be:	Provided for current year	£216,900
	+ Underprovided for previous year	£7,860
	=	£224,760

9 D

10 A

	Before redemption	Redemption	After redemption
Equity	£10.22 million	+ £1.1 million	£11.32 million
Debt	£3.25 million	- £1.1 million	£2.15 million
Gearing	31.8%		18.99%

11 B

12 D

13 B

14 C

15 B

16 D

17 B

Set up	£42,000 ÷ 720 set ups	=	£58.333 per set up	x 3 set ups	=	£175
Routine	£151,000 ÷ 10,080 hours	=	£14.98 per hour	x 56 hours	=	£839
			Total			= £1,014

18 C

19 B

	Y	W	S	E
	£	£	£	£
Selling price per unit	38.72	29.86	41.17	31.25
Variable cost per unit	30.58	25.56	34.19	20.53
Contribution per unit	8.14	4.30	6.98	10.72
Material input	1.7kg	1.5kg	1.9kg	1.6kg
Contribution per kg	4.79	2.87	3.67	6.70

Cease production of product with lowest contribution per unit of limiting factor

20 C

Economic value of assets		£5,200,000
x 11% x 3/12	=	£143,000
Reported profit		£726,580
EVA £583,580		(£726,580 – £143,000)

Section B

- 1 (a) Perhaps the best source to consider with regard to the qualities of financial information which are necessary if it is to be useful to users is the Statement of Principles. In that document, the ASB state that useful financial information should be relevant, reliable, comparable and understandable.

Relevant

Information which may influence the decisions of users would be considered to be relevant. Such influence may take two forms:

confirmatory value – i.e. the information confirms the evaluations or assessments that the user has made in the past. An example of this is where a lender has previously provided finance to the reporting company, in the expectation that the cash flow and profits will be sufficient to support repayment of the loan. The published financial statements will provide confirmation to the lender that this has been the case.

predictive value – i.e. the information provides the user with some guide or indication of what may happen in the future. An example of this is where a prospective lender will use the published financial statements as the basis of an assessment of the company's ability to service a proposed loan.

Reliable

Information is considered to be reliable if it:

- provides a faithful representation – an example of this is embodied in the need to report transactions according to their economic substance rather than their legal form
- is free from bias – an example of this is the overriding need for financial statements to provide a true and fair view, i.e. to allow the users to form their own conclusions, rather than attempting to influence the decisions or actions of the users.
- is complete, i.e. no material items have not been dealt with
- is presented prudently where there is a degree of uncertainty

Comparable

If information can be compared with previous periods (or with other companies) it will be useful as the user will be able to assess trends. This is achieved mainly through the disclosure of accounting policies (and any changes to these). Normally the consistent application of accounting policies from one period to the next will assist in rendering information comparable, but if a change in accounting policy would enhance the usefulness of the information, then the change should be made.

Understandable

Essentially this means that users should be able to appreciate the significance of the information presented. This is achieved by the disclosure of information in the notes to the financial statements. It has been argued that so much information is provided in the notes that the objective of understandability is often undermined. It is worth noting therefore, that the ASB takes the view that preparers of financial statements may assume that users have reasonable knowledge and will consider the information provided with reasonable diligence.

Mark allocation:

Marks were awarded for the discussion of the qualities, rather than use of the terms (relevance, reliability, comparability and understandability), with one mark for each valid comment, subject to a MAXIMUM of 3 marks for any one quality and an overall MAXIMUM of 8

- (b) (i) The accounting treatment in each of the areas identified by the Directors is governed by specific accounting standards. In each case, the relevant standard provides guidance as to how much choice the Directors may exercise.

Research and development expenditure is covered by SSAP 13. The standard differentiates between research expenditure and development expenditure by defining development expenditure as being the use of *existing* knowledge in order to produce new or improved materials devices or processes.

On the other hand, research expenditure could be defined as expenditure on activities which are designed to obtain *new* knowledge. The standard further divides research expenditure into two further categories. Pure research is intended to gain new knowledge for its own sake, while applied research is intended to gain *new* knowledge – but in this case there is a specific outcome intended.

The standard states that all research expenditure must be written off as incurred. However it allows a degree of choice with regard to development expenditure. Although the preferred accounting treatment is that development expenditure should also be written off as incurred, the standard allows development expenditure to be carried forward to be written off in future periods 'to the extent that its recovery can reasonably be regarded as assured'.

The standard sets out six criteria which must be met if development expenditure is to be carried forward.

If these criteria are met, the directors can choose whether or not to carry the expenditure forward. However it should be noted that the decision to carry forward or write off development expenditure must be applied consistently to all development expenditure.

Depreciation is defined in FRS 15 as the measure of the economic benefits of the value of a fixed asset that have been consumed during the accounting period. From this it follows that for all assets for which economic benefits are consumed, depreciation must be charged. This will include almost all fixed assets as perhaps only freehold land is a type of fixed asset which is not consumed, and therefore need not be depreciated. The directors have to choose the method by which the amount of depreciation to be charged in an accounting period is calculated, but this is somewhat constrained by the requirement that the method should reflect the pattern of the consumption of economic benefits over the useful life of the asset. Once a method is chosen, it should be applied consistently.

Revaluation of fixed assets is also considered in FRS 15 which states that the directors may choose whether or not to revalue fixed assets. This choice is, once again, constrained by certain requirements set out in the standard:

- all assets in the same class must be treated consistently (i.e. either revalued or carried at cost);
- if a policy of revaluation is adopted, revaluations must be kept up to date;
- depreciation should be calculated on the revalued amount.

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

- (ii) The effect on profit will depend on the period over which profit is considered.

For example a choice which reduces profit in the current year, will increase profit in future periods.

In the case of research and development expenditure, deferral increases current profit, but as amounts deferred must be charged to profit over the life of the product, future profits will be reduced.

With regard to depreciation, the full cost will be charged to profit over the useful economic life of the asset, but short term profits will be affected by the method of depreciation. If the reducing balance method is selected, depreciation charges will reduce year on year.

A more appropriate way of maximising profits is to spread the cost over as long a period as possible i.e. select the maximum useful economic life possible.

Revaluation will not affect profit in the year of revaluation as any gain is taken to a Revaluation Reserve, and not to Profit and Loss.

However, if an asset is revalued, future profits will be reduced, as depreciation will be calculated on the revalued amount, not cost.

Mark allocation: 1 mark per valid point, to a MAXIMUM of 4

- 2 (a) A finance lease is one in which substantially all the risks and rewards of ownership are transferred to the lessee.

The proposed lease arrangement is a finance lease, as Lessons will be responsible for maintaining and insuring the machine.

This indicates that substantially all the risks and rewards of ownership will be transferred to the company.

In addition, Lessons will use the machine for its full useful economic life, and this is further evidence that such a transfer has taken place.

The correct accounting treatment of a finance lease is:

- the assets should be capitalised at fair value
- having been capitalised, the assets should be depreciated
- the liability for future payments under the lease should be reported and analysed between current liabilities and long term liabilities
- the finance cost of the lease is the difference between the fair value of the assets and the total payments due under the lease
- the finance cost should be allocated to accounting periods at a constant periodic rate, but this may be approximated

Thus the charge to profit and loss under a finance lease comprises two elements, depreciation and finance cost. The total charge will be broadly equivalent to the charge which would arise if the lease was treated as an operating lease. The key difference is that under a finance lease the balance sheet includes the depreciated value of the assets under fixed assets while the liability to make future payments is also reported. This is an application of the concept of substance over form, whereby transactions are accounted for according to their economic substance, rather than strict legal form.

Mark allocation: 1 mark per valid point, to a MAXIMUM of 9

- (b) (i)** Depreciation
 SSAP 21 states that the asset should be depreciated over the shorter of the lease period and the useful economic life of the asset. Thus the depreciation period is four years.
 $£224,480 \div 4 \text{ years} \times 3/12 \text{ months} = £14,030$ say £14,000 2

Finance cost

	Payments due:		
	£24,000 + (16 x £15,500)	£272,000	
<i>less</i>	Fair value	£224,480	
	Total finance cost	£47,520	
	= per annum (over 4 years)	£11,880	
	= per 3 month period	£2,970	2

Total charge to Profit and Loss
 (£14,000 depreciation + £2,970 Finance cost) £16,970 1 5

- (ii)** Fixed Assets:

Value at inception	£224,480	
<i>less</i> : Depreciation	£14,000	
Net Book Value	£210,480	2

Creditors:

	Op Bal £000	Paid £000	Int £000	Cl £000	
Year 1	224.48	24	2.97	203.45	1
Year 2	203.45	62	11.88	153.33	1
Thus Lease creditor over 1 year			153.33		1
Lease creditor under 1 year			50.12		1
					6

- 3 (a) (i)** The requirement to prepare a Statement of Total Recognised Gains and Losses (STRGL) as well as a Profit and Loss Account is set out in FRS 3 – Reporting Financial Performance. This requirement arises due to the need to provide as much meaningful information as possible to the users of the financial statements.

In terms of gains and losses, the information in the STRGL moves financial reporting closer to a system of comprehensive disclosure of income.

The point is that the gains which are reported in the Profit and Loss Account are realised gains.

That is to say, they are gains from a sale which has taken place, and the income relating to that sale is considered to have been earned.

However, we may have other gains. These, by definition, are unrealised.

This means that although the gain has been taken into account by increasing the value of the relevant asset (i.e. it has been recognised), it cannot be reported in the Profit and Loss Account.

If such gains are not reported in some way, you may find it difficult to understand how – and why – the asset values and reserves have changed.

The STRGL provides the ‘missing’ information by reporting the TOTAL gains which have been recognised in the period.

Logically the starting point is the profit for the year (as this includes all realised gains).

The STRGL then reports the remaining (unrealised) gains which have been recognised. Therefore, the financial statements allow you to see exactly how shareholders’ funds have increased. The increase can be calculated as follows: the total value of the gains and losses reported in the STRGL

plus new share capital

less dividends

Examples of items which are reported in the Profit and Loss Account and STRGL are:

<u>Item</u>	<u>Reported in</u>
Sales of goods on credit to a customer	Profit and Loss Account
Costs incurred in running the business	Profit and Loss Account
Profit on disposal of a fixed asset	Profit and Loss Account
Increase in valuation of a fixed asset	STRGL
Foreign currency translation gains and losses	STRGL
Increases and decreases in valuation of investment properties	STRGL

NB: only two examples of each were required.

Mark allocation: 2 marks for any of the following:

Differentiation between realised and recognised gains	2
Explanation of realised gain	2
Explanation of recognised gain	2
Reference to comprehensive income	2
Movement in shareholders' funds	2
Examples 4 x 1/2 mark each	<u>2</u>
to a MAXIMUM of	8

- (ii) Earnings per share (eps) is considered to be an important figure, as it provides a basis for comparing the earnings produced by a company from one period to another. To this extent, it is considered to be a measure of the improvement (or deterioration) in performance.

While eps is a useful measure of performance from one period to the next, it does not provide a totally reliable measure of performance from one company to another, as it does not include the value of the share. However it does form the basis of the calculation of the Price Earnings (P/E) ratio, which can provide a comparison between shares.

The basis of the calculation is that earnings is divided by the number of shares in issue.

If the company has issued additional share capital, it is reasonable to expect that the additional capital will be used by the company to generate additional earnings. Therefore if the company's performance improves, we would expect eps to improve.

Earnings are defined as the total amount of profit generated by the company, after paying all costs and charges, which is attributable to ordinary shareholders. In other words, it is the profit retained by the company plus the dividend distributed to the ordinary shareholders.

Mark allocation: 1 mark per valid point, to a MAXIMUM of 4

(b)	Earnings = Retained profit	£11.7m	
	+ Ordinary dividend	<u>£2.4m</u>	
		<u>£7.7m</u>	1

Alternative calculation:

Earnings = Profit after tax	£5.3m
- Preference dividend	<u>£4.0m</u>
	<u>£7.7m</u>

Number of Shares:

10m for 9 months = 10m x 9/12	7.5m	
+ 12m for 3 months = 12m x 3/12	<u>3.0m</u>	
	<u>10.5m</u>	1

Earnings per share =	<u>£7.7m</u>	
	10.5m =	73.3p
		1

(c) Statement of Total Recognised Gains and Losses

	£m	
Profit for the year	11·7	1
Unrealised surplus on revaluation	<u>0·6</u>	1
Total gains and losses relating to the year	12·3	1
Prior period adjustment	<u>(1·2)</u>	1
Total gains and losses recognised since last report	<u>11·1</u>	1

Total for question 20

Section C

- 4 (a) As there will be no external market for the dmU, the transfer price cannot be based on market prices. This means that Musent should base the transfer price on:

Marginal Cost

as the term suggests, the starting point for the calculation of the transfer price is the marginal cost of production. In order to provide an incentive for the manufacturing division to sell, the actual price is normally set at a level above marginal cost in order to provide some degree of recovery of fixed costs. Given that all of the output of the dmU division will be passing to internal customers this is an issue of particular importance, and is considered below (see part (c)).

Full cost

in this case, the transfer price is set at a level which allows full recovery of costs by the selling division. In many cases, the transfer price will also include an element of profit to the selling division.

Negotiated Transfer Price

although the transfer price may be negotiated between the buying and selling divisions, there may also be a need to involve head office managers. The extent of such involvement will depend on whether or not the two divisions are able to negotiate freely. Where one of the parties has an advantage (for example due to access to information, or unique technology as is the case here) or is in a dominant position (perhaps due to internal politics) it may be necessary to remove such bias through head office involvement.

Mark allocation: awareness that market based transfer prices are not appropriate	1
1 mark for each appropriate basis identified to a MAXIMUM of	3
1 mark for a brief overview of each basis to a MAXIMUM of	3
	7

- (b) The major problem of transfer pricing is that it can lead to dysfunctional decision making. This can arise as managers in each section of the organisation will seek to achieve the ‘best’ outcome – from their own point of view.

If the performance of a section is based on results which can be influenced by the transfer price, managers may not be motivated to consider the results of the organisation as a whole.

In order to avoid such problems it must be remembered that any profit earned by the selling division will become a cost of the buying division, and consequently has no effect on overall organisational profit. This means that the transfer price should be set at a level which motivates managers to take decisions which will have the optimum outcome for the organisation as a whole.

In the case of Musent, the fact that the dmU division has no outlet for its product apart from two internal divisions means that the dmU division is in a potentially weak situation. The managers of the domestic and in-car divisions could easily improve their profit performance by agreeing that they will only pay an artificially low price to the dmU division. While this would improve the performance of the domestic and in-car divisions, it would lead to apparently poor performance in the case of the dmU division. A further complication is that cost based approaches to transfer pricing may not provide an incentive for the selling division to control costs, as the transfer price allows for cost recovery. This can lead to inefficiency, and will have a detrimental effect on overall profit.

As the dmU division is producing a new and unique product there is no comparable product against which it can be directly benchmarked.

Mark allocation: 1 mark for each relevant problem to a MAXIMUM of	3
1 mark for each problem specifically linked to Musent, to a MAXIMUM of	3
	6

- (c) A cost based approach (whether marginal or full cost) is unlikely to be appropriate for Musent for the following reasons:
- as the dmU is a new product, there is no existing data which can be used to monitor the efficiency of the dmU division
 - as there is no external market the dmU division has no incentive to control or reduce costs, as these will be passed on to the buying divisions

The decision on the basis on which transfer prices will be calculated should be consistent with the overall objectives of the company.

Given that the dmU is a unique product it is likely that the domestic and in-car divisions will derive a distinct benefit from access to the product.

Therefore Musent will wish to ensure that the competitive advantage of the dmU is not dissipated by ineffective policies which reduce the extent to which the product can be exploited.

Based on the above, it would seem that there are two possible bases for the transfer price. Which is ultimately implemented will depend on the company's performance measurement targets. If a profit based performance measurement system is used, there is a strong argument that the transfer price should be based on full cost. This will allow the dmU division to be assessed according to the standards which would apply if it were totally independent. The key constraint on its independence is the decision not to sell the dmU to external customers, so that the other divisions can exploit the advantages of the product.

In order to ensure that the dmU division is operating efficiently, there will be a need to monitor other aspects of performance (e.g. quality, meeting agreed delivery deadlines).

If performance measures other than profit are used, it may be appropriate to use a negotiated transfer price. Whether or not head office will need to be involved in the negotiations will depend on the nature of the relationships within the company. If negotiations are conducted on a win/lose basis, head office involvement will be necessary to remove bias from the negotiations. If managers take decisions in order to maximise the performance of the whole company, there will be less need for Head Office involvement.

Mark allocation:	1 mark for each valid point, to a MAXIMUM of	5
	for a conclusion which is justified and applied to Musent	2

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7

Total for question 20

- 5 (a) (i) A sunk cost is a cost which has already been incurred, and cannot be recovered. Therefore it has no impact on the decision and should not be considered when choosing between alternatives.

An example is the development costs incurred to date.

As these costs have been incurred, and cannot be recovered, they need not be considered in the decision.

Mark allocation:	1 mark per valid point, to a MAXIMUM of	3
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- (ii) An opportunity cost is the cost of foregoing an alternative course of action, or the benefit which has been given up by foregoing a possible course of action.

An example is the contribution on the three sales which will be lost due to the delay in completing project BR156.

Mark allocation:	1 mark per valid point, to a MAXIMUM of	2
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- (iii) A relevant cost is a cost which will be incurred or can be avoided, subject to a decision which has yet to be taken.

An example is the variable cost of manufacturing the product once the project has been completed.

Mark allocation:	1 mark per valid point, to a MAXIMUM of	2
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(b) Project PF201	£m	£m	
Selling price per unit	1.43		
Variable cost per unit	1.12		
	<hr/>		
Contribution per unit	0.31		1
x expected sales volume (40 + 55 + 50) = 145			
Total contribution from sales in first three years		44.95	1
less:			
Development costs: to date	nil		1
to complete	31.14		1
additional	2.40		1
transfer of team	0.45		1
	<hr/>		
		33.99	
Opportunity Cost of using team:			
BR156 Selling price per unit	2.86		
Variable cost per unit	1.96		
	<hr/>		
Contribution per unit	0.90		1
x lost sales (3 units)		= 2.70	1
		<hr/>	
Contribution generated		8.26	1
less Fixed costs 700 hrs per unit			
x 145 units at £100 per hour		10.15	2
		<hr/>	
Loss		1.89	1
		<hr/>	
Conclusion consistent with criterion			1

NB Candidates who excluded fixed costs were awarded the relevant marks if they justified the exclusion on the basis that the fixed costs were unavoidable.

Candidates who simply included fixed costs without any explanation were awarded one mark only, with the second mark awarded for a reference to the need to consider whether such costs were relevant.

- 6 (a) (i) Materials requirements planning (MRP I)**
- provides a coordinated approach to planning and buying materials
 - considers lead times as well as products and quantities
 - mainly used in a batch manufacturing approach, but can be applied to advanced manufacturing technologies
 - coordinates the materials requirements of all items produced, so that materials purchasing can be streamlined
 - therefore allows maximum discounts to be negotiated, leading to reduced costs
 - helps to avoid stock-outs of key materials or components.
- Mark allocation: 1 mark per valid point, to a maximum of 4
- (ii) Manufacturing resource planning (MRP II)**
- could be considered to be a development of MRP I
 - but as well as materials, all resources are considered
 - essentially all information is held on a single database
 - access to the data base is not restricted to certain departments
 - thus when a decision in any department leads to a change in the resources required, the 'knock on' effect on the resource requirements in other departments is incorporated
 - helps to avoid the problems of departments working in isolation, and the lack of communication which may result.
- Mark allocation: 1 mark per valid point, to a maximum of 4
- (iii) Optimised production technology (OPT)**
- could be described as a computer simulation of the workload
 - is based on the premise that productivity is limited by the point in the process at which output is lowest – the bottleneck
 - by identifying the bottleneck, OPT allows action to be taken to remove the constraint, and thus 'balance' the workflow
 - by ensuring that work in progress is not built up at the point of input to the bottleneck, stock levels can be reduced
 - stock-outs can be avoided by ensuring that there is always input to the bottleneck
 - this type of stock control is only possible if the bottleneck is identified.
- Mark allocation: 1 mark per valid point, to a maximum of 4

(b) Differences between the techniques

The main differences may be summarised as follows:

- MRP I focuses attention on materials and seeks to make material purchasing and usage as efficient as possible, but MRP II builds on this and seeks to achieve efficiency in the use of all resources
- and to integrate all aspects of the planning and production processes through the use of a single organisation wide database
- However both have the potential weakness that they focus on activities and processes as they currently are, and therefore do not seek to eliminate problems in the design of the work flow
- OPT, on the other hand specifically seeks such improvements by identifying constraints on improved efficiency, in order that these may be eliminated
- OPT also recognises that removal of a constraint will create a new constraint, which must be eliminated. As this will be an ongoing process, OPT has a positive contribution to make to improved quality, whereas MRP may be viewed as cost reduction techniques.

Mark allocation: 1 mark for each valid point, to a MAXIMUM of

2

(c) Potential problems

The management will need to consider:

- the change from manufacturing for stock to manufacturing on a just in time basis will be a major change in culture
- culture change is a slow and long term process. It is not clear from the information provided how quickly this change must be made
- while the company offers a 'two week promise' there is no evidence that there is any quality management programme. Consequently there may be inefficiencies in the production process which are hidden by the fact that sufficient stock is maintained to avoid stock-outs
- there may be difficulties in achieving a good working relationship between the BFP design team and the customer's design team due to differences in culture and practices
- as the company intends to continue selling via the website and catalogues, the old culture will still remain. This may make the task of achieving the necessary changes even more difficult
- the need for the change has been sold to staff on the basis of greater stability and certainty. This may not be consistent with the personal goals of the staff
- more specifically, whether staff will find the proposal of long term wage stability attractive will depend on the level of wages which are offered, and how staff view the offer in comparison to alternative wage structures and employment
- the reduction in the product range may cause a loss of customers, which would adversely affect the sales levels of the remaining products.

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

6

20