Answers

1 (a) Pedantic

Consolidated profit and loss account for the year ended 30 September 2008

	£'000	£'000
Turnover (85,000 + (42,000 x 6/12) – 8,000 intra-group sales)		98,000
Cost of sales (w (i))		(72,000)
Gross profit		26,000
Distribution costs (2,000 + (2,000 x 6/12))		(3,000)
Administrative expenses (6,000 + (3,200 x 6/12) – 300 acquisition costs)		(7,300)
Operating profit		15,700
Finance costs (300 + (400 x 6/12))		(500)
Profit before tax		15,200
Taxation (4,700 + (1,400 x 6/12))		(5,400)
Profit after tax		9,800
Minority interest (((3,000 x 6/12) – (800 URP + 200 depreciation)) x 40%)		(200)
Profit for the year		9,600

(b) Consolidated balance sheet as at 30 September 2008

Fixed assets		
Intangible – goodwill (w (ii))		3,300
Tangible (40,600 + 12,600 + 2,000 – 200 depreciation adjustment (w (i)))		55,000
		58,300
Current assets (w (iii))	21,400	
Creditors: amounts falling due within one year		
(8,200 + 4,700 – 400 intra-group balance)	(12,500)	
Net current assets		8,900
Total assets less current liabilities		67,200
Creditors: amounts falling due after more than one year		
10% loan notes (4,000 + 3,000)		(7,000)
Net assets		60,200
Capital and reserves		
Equity shares of £1 each ((10, 000 + 1,600) w (ii))		11,600
Share premium (w (ii))		8,000
Profit and loss account (w (iv))		36,000
		55,600
Minority interest (w (v))		4,600
		60,200

Workings (figures in brackets in £'000)

(i) Cost of sales

	£'000
Pedantic	63,000
Sophistic (32,000 x 6/12)	16,000
Intra-group sales	(8,000)
URP in stock	800
Additional depreciation (2,000/5 years x 6/12)	200
	72,000

The unrealised profit (URP) in stock is calculated as (£8 million – £5·2 million) x 40/140 = £800,000.

(ii) Goodwill/Cost of control in Sophistic

Investment at cost		£'000
Shares (4,000 x 60% x 2/3 x £6)		9,600
Acquisition costs		300
	£'000	9,900
Less – Equity shares of Sophistic (4,000 x 60%)	(2,400)	
– pre-acquisition reserves (5,000 x 60% see below)	(3,000)	
– fair value adjustment (2,000 x 60%)	(1,200)	(6,600)
Goodwill on consolidation		3,300

The pre-acquisition reserves are:	
At 30 September 2008	6,500
Earned in the post acquisition period (3,000 x 6/12)	(1,500)
	5,000

The 1·6 million shares (4,000 x 60% x 2/3) issued by Pedantic would be recorded as share capital of £1·6 million and share premium of £8 million (1,600 x £5).

(iii) Current assets

Pedantic	16,000
Sophistic	6,600
URP in stock	(800)
Cash in transit	200
Intra-group balance	(600)
	21,400

(iv) Profit and loss account

Pedantic per balance sheet	35,400
Acquisition costs charged to administrative expenses	300
Sophistic's post acquisition profit	
(((3,000 x 6/12) – (800 URP + 200 depreciation)) x 60%)	300
	36,000

(v) Minority interest in balance sheet

Net assets per balance sheet	10,500	
URP in stock	(800)	
Net fair value adjustment (2,000 – 200)	1,800	
	11,500	x 40% = 4,600

2 (a) Candel – Profit and loss account for the year ended 30 September 2008

	£'000
Turnover (300,000 – 2,500)	297,500
Cost of sales (w (i))	(225,400)
Gross profit	72,100
Distribution costs	(14,500)
Administrative expenses (22,200 – 400 + 100 see note below)	(21,900)
Operating profit	35,700
Finance costs (200 + 1,200 (w (ii)))	(1,400)
Profit before tax	34,300
Taxation (11,400 + (6,000 – 5,800 deferred tax))	(11,600)
Profit for the year	22,700

Note: as it is considered that the outcome of the legal action against Candel is unlikely to succeed (only a 20% chance) it is inappropriate to provide for any damages. The potential damages are an example of a contingent liability which should be disclosed (at £2 million) as a note to the financial statements. The unrecoverable legal costs are a liability (the start of the legal action is a past event) and should be provided for in full.

(b) Candel – Statement of movements in shareholders' funds for the year ended 30 September 2008

	Share capital £'000	Revaluation reserve £'000	Profit and loss account £'000	Total equity £'000
Balances at 1 October 2007	50,000	10,000	24,500	84,500
Dividend			(6,000)	(6,000)
Revaluation loss		(4,500)		(4,500)
Profit for year			22,700	22,700
Balances at 30 September 2008	50,000	5,500	41,200	96,700

(c) Candel – Balance sheet as at 30 September 2008

	£'000	£'000
Fixed assets (w (iii))		
Intangible – development costs		14,800
Tangible		
Leasehold property	43,000	
Plant and equipment	38,400	81,400
		96,200
Current assets		
Stock	20,000	
Trade debtors	43,100	
	63,100	
Creditors: amounts falling due within one year		
Trade creditors (23,800 – 400 + 100 – re legal action)	23,500	
Bank overdraft	1,300	
Corporation tax	11,400	
	(36,200)	
Net current assets		26,900
Total assets less current liabilities		123,100
Creditors: amounts falling due after more than one year		
8% redeemable preferences shares (20,000 + 400 w (ii))		(20,400)
Provisions for liabilities		
Deferred tax		(6,000)
		96,700
Capital and reserves		
Equity (from (b))		
Equity shares of 25 pence each		50,000
Revaluation reserve	5,500	
Profit and loss account	41,200	46,700
		96,700

Workings (figures in brackets in £'000)

(i) Cost of sales:

	£'000
Per trial balance	204,000
Depreciation (w (iii)) – leasehold property	2,500
– plant and equipment	9,600
Loss on disposal of plant (4,000 – 2,500)	1,500
Amortisation of development costs (w (iii))	4,000
Research and development expensed (1,400 + 2,400 (w (iii)))	3,800
	225,400

(ii) The finance cost of £1·2 million for the preference shares is based on the effective rate of 12% applied to £20 million issue proceeds of the shares for the six months they have been in issue (20m x 12% x 6/12). The dividend paid of £800,000 is based on the nominal rate of 8%. The additional £400,000 (accrual) is added to the carrying amount of the preference shares in the balance sheet. As these shares are redeemable they are treated as debt and their dividend is treated as a finance cost.

(iii) Fixed assets:	£'000
Leasehold property	
Valuation at 1 October 2007	50,000
Depreciation for year (20 year life)	(2,500)
Carrying amount at date of revaluation	47,500
Valuation at 30 September 2008	(43,000)
Revaluation deficit (to reserve)	4,500
Plant and equipment per trial balance (76,600 – 24,600)	52,000
Disposal (8,000 – 4,000)	(4,000)
	48,000
Depreciation for year (20%)	(9,600)
Carrying amount at 30 September 2008	38,400
Capitalised/deferred development costs	
Carrying amount at 1 October 2007 (20,000 – 6,000)	14,000
Amortised for year (20,000 x 20%)	(4,000)
Capitalised during year (800 x 6 months)	4,800
Carrying amount at 30 September 2008	14,800

Note: development costs can only be treated as an asset from the point where they satisfy the deferment criteria in SSAP 13 *Accounting for research and development*. In this case this will be from when the directors became confident that the project would be successful and yield a profit. Thus only the development costs from 1 April to 30 September 2008 of £4·8 million (800 x 6 months) can be capitalised. These will not be amortised as the project is still in development. The research costs of £1·4 million plus three months' development costs of £2·4 million (800 x 3 months) (i.e. those incurred before 1 April 2008) are treated as an expense.

3 (a) Equivalent ratios from the financial statements of Merlot (workings in £'000)

Return on year end capital employed (ROCE)	20·9%	(1,400 + 590)/(2,800 + 3,200 + 500 + 3,000) x 100
Pre tax return on equity (ROE)	50%	1,400/2,800 x 100
Net asset turnover	2·3 times	20,500/(14,800 – 5,700)
Gross profit margin	12·2%	2,500/20,500 x 100
Operating profit margin	9·8%	2,000/20,500 x 100
Current ratio	1·3:1	7,300/5,700
Closing stock holding period	73 days	3,600/18,000 x 365
Trade debtors' collection period	66 days	3,700/20,500 x 365
Trade creditors' payment period	77 days	3,800/18,000 x 365
Gearing	71%	(3,200 + 500 + 3,000)/9,500 x 100
Interest cover	3·3 times	2,000/600
Dividend cover	1·4 times	1,000/700

As per the question, Merlot's obligations under finance leases (3,200 + 500) have been treated as debt when calculating the ROCE and gearing ratios.

(b) Assessment of the relative performance and financial position of Grappa and Merlot for the year ended 30 September 2008

Introduction

This report is based on the draft financial statements supplied and the ratios shown in (a) above. Although covering many aspects of performance and financial position, the report has been approached from the point of view of a prospective acquisition of the entire equity of one of the two companies.

Profitability

The ROCE of 20·9% of Merlot is far superior to the 14·8% return achieved by Grappa. ROCE is traditionally seen as a measure of management's overall efficiency in the use of the finance/assets at its disposal. More detailed analysis reveals that Merlot's superior performance is due to its efficiency in the use of its net assets; it achieved a net asset turnover of 2·3 times compared to only 1·2 times for Grappa. Put another way, Merlot makes sales of £2·30 per £1 invested in net assets compared to sales of only £1·20 per £1 invested for Grappa. The other element contributing to the ROCE is profit margins. In this area Merlot's overall performance is slightly inferior to that of Grappa, gross profit margins are almost identical, but Grappa's operating profit margin is 10·5% compared to Merlot's 9·8%. In this situation, where one company's ROCE is superior to another's it is useful to look behind the figures and consider possible reasons for the superiority other than the obvious one of greater efficiency on Merlot's part.

A major component of the ROCE is normally the carrying amount of the fixed assets. Consideration of these in this case reveals some interesting issues. Merlot does not own its premises whereas Grappa does. Such a situation would not necessarily give a ROCE advantage to either company as the increase in capital employed of a company owning its factory would be compensated by a higher return due to not having a rental expense (and *vice versa*). If Merlot's rental cost, as a percentage of the value of the related factory, was less than its overall ROCE, then it would be contributing to its higher ROCE. There is insufficient information to determine this. Another relevant point may be that Merlot's owned plant is nearing the end of its useful life (carrying amount is only 22% of its cost) and the company seems to be replacing owned plant with leased plant. Again this does not necessarily give Merlot an advantage, but the finance cost of the leased assets at only 7·5% is much lower than the overall ROCE (of either company) and therefore this does help to improve Merlot's ROCE. The other important issue within the composition of the ROCE is the valuation basis of the companies' fixed assets. From the question, it appears that Grappa's factory is at current value (there is a property revaluation reserve) and note (ii) of the question indicates the use of historical cost for plant. The use of current value for the factory (as opposed to historical cost) will be adversely impacting on Grappa's ROCE. Merlot does not suffer this deterioration as it does not own its factory.

The ROCE measures the overall efficiency of management; however, as Victular is considering buying the equity of one of the two companies, it would be useful to consider the return on equity (ROE) – as this is what Victular is buying. The ratios calculated are based on pre-tax profits; this takes into account finance costs, but does not cause taxation issues to distort the comparison. Clearly Merlot's ROE at 50% is far superior to Grappa's 19·1%. Again the issue of the revaluation of Grappa's factory is making this ratio appear comparatively worse (than it would be if there had not been a revaluation). In these circumstances it would be more meaningful if the ROE was calculated based on the asking price of each company (which has not been disclosed) as this would effectively be the carrying amount of the relevant equity for Victular.

Gearing

From the gearing ratio it can be seen that 71% of Merlot's assets are financed by borrowings (39% is attributable to Merlot's policy of leasing its plant). This is very high in absolute terms and double Grappa's level of gearing. The effect of gearing means that all of the profit after finance costs is attributable to the equity even though (in Merlot's case) the equity represents only 29% of the financing of the net assets. Whilst this may seem advantageous to the equity shareholders of Merlot, it does not come without risk. The interest cover of Merlot is only 3·3 times whereas that of Grappa is 6 times. Merlot's low interest cover is a direct consequence of its high gearing and makes its profits vulnerable to relatively small changes in operating activity. For example, small reductions in sales, profit margins or small increases in operating expenses could result in losses and mean that interest charges would not be covered.

Another observation is that Grappa has been able to take advantage of the receipt of government grants; Merlot has not. This may be due to Grappa purchasing its plant (which may then be eligible for grants) whereas Merlot leases its plant. It may be that the lessor has received any grants available on the purchase of the plant and passed some of this benefit on to Merlot via lower lease finance costs (at 7·5% per annum, this is considerably lower than Merlot has to pay on its 10% loan notes).

Liquidity

Both companies have relatively low liquid ratios of 1·2 and 1·3 for Grappa and Merlot respectively, although at least Grappa has £600,000 in the bank whereas Merlot has a £1·2 million overdraft. In this respect Merlot's policy of high dividend payouts (leading to a low dividend cover and a low profit and loss account reserve) is very questionable. Looking in more depth, both companies have similar stock holding periods; Merlot collects its debtors one week earlier than Grappa (perhaps its credit control procedures are more active due to its large overdraft), and of notable difference is that Grappa receives (or takes) a lot longer credit period from its suppliers (108 days compared to 77 days). This may be a reflection of Grappa being able to negotiate better credit terms because it has a higher credit rating.

Summary

Although both companies may operate in a similar industry and have similar profits after tax, they would represent very different purchases. Merlot's turnover is over 70% more than that of Grappa, it is financed by high levels of debt, it rents rather than owns property and it chooses to lease rather than buy its replacement plant. Also its remaining owned plant is nearing the end of its life. Its replacement will either require a cash injection if it is to be purchased (Merlot's overdraft of £1·2 million already requires serious attention) or create even higher levels of gearing if it continues its policy of leasing. In short although Merlot's overall return seems more attractive than that of Grappa, it would represent a much more risky investment. Ultimately the investment decision may be determined by Victular's attitude to risk, possible synergies with its existing business activities, and not least, by the asking price for each investment (which has not been disclosed to us).

(c) The generally recognised potential problems of using ratios for comparison purposes are:

- inconsistent definitions of ratios
- financial statements may have been deliberately manipulated (creative accounting)
- different companies may adopt different accounting policies (e.g. use of historical costs compared to current values)
- different managerial policies (e.g. different companies offer customers different payment terms)
- balance sheet figures may not be representative of average values throughout the year (this can be caused by seasonal trading or a large acquisition of fixed assets near the year end)
- the impact of price changes over time/distortion caused by inflation

When deciding whether to purchase a company, Victular should consider the following additional useful information:

- in this case the analysis has been made on the draft financial statements; these may be unreliable or change when being finalised. Audited financial statements would add credibility and reliance to the analysis (assuming they receive an unqualified Auditors' Report).
- forward looking information such as profit and balance sheet forecasts, capital expenditure and cash budgets and the level of orders on the books.

– the current (fair) values of assets being acquired.
– the level of risk within a business. Highly profitable companies may also be highly risky, whereas a less profitable company may have more stable 'quality' earnings.
– not least would be the expected price to acquire a company. It may be that a poorer performing business may be a more attractive purchase because it is relatively cheaper and may offer more opportunity for improving efficiencies and profit growth.

4 (a) Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events. Provisions are liabilities of uncertain timing or amounts, i.e. they are normally estimates. In essence provisions should be recognised if they meet the definition of a liability. Equally they should not be recognised if they do not meet the definition. A balance sheet would not give a 'fair representation' if it did not include all of a company's liabilities (or if it did include, as liabilities, items that were not liabilities). These definitions benefit the reliability of financial statements by preventing profits from being 'smoothed' by making a provision to reduce profit in years when they are high and releasing those provisions to increase profit in years when they are low. It also means that the balance sheet cannot avoid the immediate recognition of long-term liabilities (such as environmental provisions) on the basis that those liabilities have not matured.

(b) (i) Future costs associated with the acquisition/construction and use of fixed assets, such as the environmental costs in this case, should be treated as a liability as soon as they become unavoidable. For Promoil this would be at the same time as the platform is acquired and brought into use. The provision is for the present value of the expected costs and this same amount is treated as part of the cost of the asset. The provision is 'unwound' by charging a finance cost to the profit and loss account each year and increasing the provision by the finance cost. Annual depreciation of the asset effectively allocates the (discounted) environmental costs over the life of the asset.

Profit and loss account for the year ended 30 September 2008	**£'000**
Depreciation (see below)	3,690
Finance costs (£6·9 million x 8%)	552
Balance sheet as at 30 September 2008	
Fixed assets	
Cost (£30 million + £6·9 million (£15 million x 0·46))	36,900
Depreciation (over 10 years)	(3,690)
	33,210
Creditors due after more than one year	
Environmental provision (£6·9 million x 1·08)	7,452

(ii) If there was no legal requirement to incur the environmental costs, then Promoil should not provide for them as they do not meet the definition of a liability. Thus the oil platform would be recorded at £30 million with £3 million depreciation and there would be no finance costs.

However, if Promoil has a published policy that it will voluntarily incur environmental clean up costs of this type (or if this may be implied by its past practice), then this would be evidence of a 'constructive obligation' under FRS 12 and the required treatment of the costs would be the same as in part (i) above.

5

Year ended/as at	**30 September 2006**	**30 September 2007**	**30 September 2008**
Profit and loss account	**£**	**£**	**£**
Depreciation (see workings)	180,000	270,000	119,000
Maintenance (60,000/3 years)	20,000	20,000	20,000
Discount received (840,000 x 5%)	(42,000)		
Staff training	40,000		
	198,000	290,000	139,000
Balance sheet (see below)			
Plant and equipment			
Cost	920,000	920,000	670,000
Accumulated depreciation	(180,000)	(450,000)	(119,000)
Carrying amount	740,000	470,000	551,000

Workings	**£**
Manufacturer's base price	1,050,000
Less trade discount (20%)	(210,000)
Base cost	840,000
Freight charges	30,000
Electrical installation cost	28,000
Pre-production testing	22,000
Initial capitalised cost	920,000

The depreciable amount is £900,000 (920,000 – 20,000 residual value) and, based on an estimated machine life of 6,000 hours, this gives depreciation of £150 per machine hour. Therefore depreciation for the year ended 30 September 2006 is £180,000 (£150 x 1,200 hours) and for the year ended 30 September 2007 is £270,000 (£150 x 1,800 hours).

Note: early settlement discount, staff training in use of machine and maintenance are all revenue items and cannot be part of capitalised costs.

Carrying amount at 1 October 2007	470,000
Subsequent expenditure	200,000
Revised 'cost'	670,000

The revised depreciable amount is £630,000 (670,000 – 40,000 residual value) and with a revised remaining life of 4,500 hours, this gives a depreciation charge of £140 per machine hour. Therefore depreciation for the year ended 30 September 2008 is £119,000 (£140 x 850 hours).

This marking scheme is given as a guide in the context of the suggested answers. Scope is given to markers to award marks for alternative approaches to a question, including relevant comment, and where well-reasoned conclusions are provided. This is particularly the case for written answers where there may be more than one acceptable solution.

			Marks
1	**(a)**	Profit and loss account:	
		turnover	$1^1/_2$
		cost of sales	3
		distribution costs	$^1/_2$
		administrative expenses	1
		finance costs	$^1/_2$
		taxation	$^1/_2$
		minority interest	2
			9
	(b)	Balance sheet:	
		goodwill	5
		tangible assets	2
		current assets	$1^1/_2$
		creditors due within one year	1
		10% loan notes	$^1/_2$
		equity shares	1
		share premium	1
		profit and loss account	2
		minority interest	2
			16
		Total for question	**25**
2	**(a)**	Profit and loss account:	
		turnover	1
		cost of sales	5
		distribution costs	$^1/_2$
		administrative expenses	$1^1/_2$
		finance costs	$1^1/_2$
		taxation	$1^1/_2$
			11
	(b)	Statement of movements in shareholders' funds:	
		brought forward figures	1
		dividends	1
		revaluation reserve	1
		profit and loss account	1
			4
	(c)	Balance sheet:	
		deferred development costs	2
		leasehold property	1
		plant and equipment	1
		stock	$^1/_2$
		trade debtors	$^1/_2$
		trade creditors	$1^1/_2$
		overdraft	$^1/_2$
		corporation tax	1
		preference shares	1
		deferred tax	1
			10
		Total for question	**25**

				Marks
3	**(a)**	Merlot's ratios		**8**
	(b)	1 mark per valid comment up to		**12**
	(c)	1 mark per relevant point		**5**
			Total for question	**25**
4	**(a)**	1 mark per relevant point		**5**
	(b)	**(i)** explanation of treatment		2
		depreciation		1
		finance cost		1
		fixed asset		2
		provision		1
				7
		(ii) figures for asset and depreciation if not a constructive obligation		1
		what may cause a constructive obligation		1
		subsequent treatment if it is a constructive obligation		1
				3
			Total for question	**15**
5	initial capitalised cost			2
	upgrade improves efficiency and life (therefore capitalise)			1
	revised carrying amount at 1 October 2007			1
	annual depreciation (1 mark each year)			3
	maintenance costs charged at £20,000 each year			1
	discount received (in profit and loss account)			1
	staff training (not capitalised and charged to income)			1
			Total for question	**10**