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Mark Scheme (Results)

January 2014

International Advanced Level
Accounting (WAC02/01)

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January 2014
Publications Code IA037543

General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.

- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.

- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.

- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.

- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.

- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.

- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.

- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

- **Question 1**

- part (a)

Inflows						
Year 1	13500	52	0.73	512460	√	
Year 2	14000	52	0.75	546000	√	
Year 3	14000	52	0.75	546000		
Year 4	14500	52	0.77	580580	√	
Outflows						
Year 1	8500	52	164000	278000	√	
Year 2	8500	52	164000	278000	√	
Year 3	8800	52	164000	293600	√	
Year 4	8800	52	164000	293600	√	
Net Present Value			Net	Discount	Discounted	
	Inflow	Outflow	Cash flow	Factor	Net CF	
Year 0				9%	-700000.00	√
Year 1	512460	278000	234460	√o/f 0.917	214999.82	√o/f
Year 2	546000	278000	268000	√o/f 0.842	225656.00	√o/f
Year 3	546000	293600	252400	√o/f 0.772	194852.80	√o/f
Year 4	580580	293600	286980	√o/f 0.708	203181.84	√o/f
					138690.46	√o/f √C

18 marks

- part (b)

Payback period	Net		
	Cash flow	Cumulative	
Year 1	234460	234460	
Year 2	268000	502460	√ o/f
Year 3	252400	754860	√ o/f

Payback period = 700 000 - 502 460 = 197 540 √ o/f

=2 years ($\frac{197\ 540\ o/f}{252\ 400\ √\ o/f}$ x 12) √ = 2 years √ o/f 9.4 months √√ o/f

8 marks

- part (c)

Answers may include :
o/f rule applies

For investment
NPV method states invest √ as NPV is positive √
Payback method says invest √ as project does pay back √ . Payback period of 2.94 years should be acceptable for the company√
Positive cash flows received each year √

Other Relevant Points – could be For or Against investment.
How accurate are the predictions √ for costs, cost of capital, and revenues? √
Chance of renewal of contract after 4 years?√ Would this be profitable? √
Other possible investment projects available at present? √ More or less profitable? √
Objectives/strategy of company? √ Is this investment in line with objectives? √
Is supermarket ethical? √
Other methods could be considered e.g. Accounting rate of return √
Future prospects of investment √
Sandwich market is very competitive √
Sandwiches/food is a basic essential product √

Maximum for arguing one side only is 8 marks

Overall Conclusion
Company should invest. √√

12 marks

- part (d) (i)

Internal rate of Return =
Lower discount rate√ + (%difference between rates√ x $\frac{\text{NPV using lower \%rate}) \surd}{\text{Difference between NPVs}) \surd}$

$$= 16\% \surd + (4 \surd \times \frac{21\,430) \surd}{55\,669) \surd}$$

= 17.54% √ o/f √ C

10 marks

- part (d) (ii)

IRR at 17.54% o/f is greater√ than the cost of capital at 9%√ so company should invest in project√√ o/f

4 marks
Total 52 marks

Question 2
part (a)

Statement of Cash Flow for y/e 31 December 2013			
Cash Flows from operating activities √			
Profit from operations (222000 √+ 8750 √)	230750	√√	
Add Depreciation	137000	√√√√√√	
Less Profit on Sale of Fixed Asset	(13000)	√	
Operating cash flow before working capital changes	354750	√o/f	
Increase in inventories	(38000)	√	
Increase in trade receivables	(7000)	√	**19**
Increase in trade payables	24000	√	
Cash generated from operations	333750	√o/f	
Less Interest Paid: Debenture (7% x 250 000 x 0.5) √	(8750)	√√	
Less Tax Paid	(121000)	√	
Net Cash from Operating Activities	204000	√o/f	
Cash Flow from Investing Activities √			
Payments to acquire tangible fixed assets	(455000)	√	
Proceeds from sale of tangible fixed assets	54000	√	
Net Cash Used in Investing Activities	(401000)	√o/f	**4**
Cash Flow from Financing Activities √			
Issue of Ordinary shares (200000√ + 100000√)	300000	√√	
Issue of debenture	250000	√	
Repayment of bank loan	(175000)	√	
Dividends Paid : Final 2012 (1 000 000 x 4p) √	(40000)	√√	
Interim 2013 (1 200 000 x 2p) √	(24000)	√√	
Preference (400 000 x 6%) √	(24000)	√√	
Net Cash From in Financing Activities	287000	√o/f	**12**
Net increase in cash and cash equivalents √	90000	√o/f √C	**3**
Cash and cash equivalents at beginning of the year	404000	√	
Cash and cash equivalents at the end of the year	494000	√	**2**
	TOTAL	√ x 40	**40 Marks**
Depreciation Calculation			
Leaving the books with machinery sold (258 000 - 41 000) √ =217000 √			
Left in the books (530 000 - 217 000) √ = 313 000 √			
Depreciation for the year = (450 000 - 313 000) √ = 137 000 √			

Part b

Answers may include:

Advantages of debentures

Debenture may have a lower rate of interest √ which would have been fixed on issue √. The bank loan may have a higher rate if there is a period of high or rising interest rates. √

Interest only has to be paid on a debenture every 6 months √, whereas bank loans require monthly repayments √. The debenture therefore allows the company some breathing space √ which is useful if trading is seasonal, or going through a period of low sales. √

Debenture may be for a longer period of time, √ which may benefit company, especially if to finance a long term project. √

Bank may wish to be involved in decision-making etc if loan given √ e.g. ask for a seat on the board √

Could argue either / both sides (as one √ each)

Interest on both is allowable for tax√√

Both have the same effect on gearing ie worsens √√

Could argue either / both sides – max of 2 ticks

Both would require assets √ to be offered as security/collateral. √

Bank loan could be renewed/refinanced √ to be the same length as a debenture√

Neither result in dilution of ownership √ so share price may not fall √

Advantages of bank loans

Interest rate may be lower √

Bank loan is likely to be for shorter period √ so less interest may be paid. √

Monthly repayments may be preferable √ to larger six-monthly repayments.√

Bank may have good relationship with company √ and give advice etc √

Debenture holders may wish to be involved in decision-making/control √ e.g. ask for a seat on the board √

Maximum for arguing one side only, 8 marks

Conclusion

Debentures / bank loans are better √√ 2 marks

12 marks

TOTAL 52 marks

Question 3

- part (a)

	Debit	Credit
(i) Statement of Comprehensive Income / Statement of Changes in Equity / Retained Earnings√	900 000 √	
Ordinary Share Dividend √		900 000
Ordinary Share Dividend	900 000 √	
Bank		900 000 √
(ii) General Reserve	2 400 000 √	
Retained Earnings		2 400 000 √
(iii) Statement of Comprehensive Income	2 000 000 √	
Provision for Customer Repayments		2 000 000 √
(iv) 4% Preference Shares	5 000 000 √	
Bank		5 000 000 √
Retained Earnings / Statement of Comprehensive Income	5 000 000 √	
Capital Redemption Reserve		5 000 000 √
(v) Property	1 000 000 √	
Revaluation Reserve		1 000 000 √
(vi) Debenture Interest √	175 000 √	
Bank √		175 000

NOTE:

(1) Allow 'Statement of Comprehensive Income' OR 'Statement of Changes in Equity' OR Retained Earnings for (i)

(2) Allow 'Statement of Comprehensive Income' OR 'Retained Earnings' for (iv)

18 marks

- part (b)

Equity	
Authorised Share Capital	
Ordinary Shares of £1	40 000 000
4% £1 Redeemable Preference Shares	15 000 000√ both
Issued Share Capital	
Ordinary Shares of £1	30 000 000 √
4% £1 Redeemable Preference Shares	5 000 000 √
Share Premium reserve	7 500 000 √
Capital Redemption Reserve	5 000 000 √√
Revaluation reserve	2 000 000 √
Retained Earnings	11 922 000 √√√√√
General Reserve	600 000 √
Total Equity	62 022 000√ o/f

Retained earnings calculation =
(12 850 000 +4 572 000)√ +(2 400 000 -2 000 000)√ – 5 000 000√ - 900 000 √
= 11 922 000 o/f √

14 marks

- part (c) (i)

Advantages
Redeemable shares can be bought back from shareholders, √ so will mean less funds leave the company in the form of dividends each year √ leaving more funds in the business for operations √ or paying dividends to ordinary shareholders √ (Max 2 ticks for one point)
Buying back debt √ means that the gearing ratio could improve/reduce. √ which reduces risk √
Statement of Financial Position looks stronger √ which could help attract investors √
Capital may not be needed √
Return on Capital employed will rise √

4 marks

- part (c) (ii)

Disadvantages
Buying back the shares √ means a large outflow of funds at this time. √
Administration costs of buying back shares are high √ e.g. staff time, bank fees, postage etc. √
Preference shareholders may be unhappy √ and may not invest in the future √

4 marks

- part (d)

Evaluation of creating and utilising Capital Redemption Reserve (CRR);

Answers may include:

Case For;
CRR acts as a creditors' buffer √√
Capital base is maintained √
CRR is a Capital Reserve √ so it prevents directors/shareholders √ from taking cash/ capital out of the business, √ leaving little/nothing for creditors in the event of the company experiencing liquidity/ trading problems. √
Cannot be transferred back to the Statement of Comprehensive Income √ and then used to pay out dividends √
Presence of CRR may help a company obtain credit√ or investment/ buying of company shares√ as Statement of Financial Position appears stronger √
In certain circumstances e.g. redemption of shares, the CRR must be created by company law √ therefore should be of benefit. √
CRR can be used for a bonus issue of shares √

Case Against ;
Creating a CRR takes time and money √ and accounting expertise. √
Reduces flexibility, √ as company may not be able to do what they want to do e.g. redeem shares, √ if e.g. insufficient funds in revenue reserves. √

Maximum for arguing one side only 8 marks

Conclusion
Capital Redemption Reserve is worthwhile/ useful/ effective. √√

12 marks

Total 52 marks

- **Question 4**

- part (a)

80 + 31 + 42 + 28 + 39 = £220 million √

Capital Budget

Share capital	220 x 40%	=	£88 million √
	6% Debenture	=	£56 million √
	Bank loan	=	£28 million √
	Retained profit	=	£48 million √
	Total	=	£220 million √

6 marks

- part (b)

Week	1	2	3	4
		6 000 + 800	5 500 + 400	
Production	6 800 √	6 800 √√	5 900 √√	3 200 √

6 marks

- part (c)

	Week 1	Week 2	Week 3	Week 4
Option 1	56 400 000√	42 300 000√	38 775 000√	22 560 000√
Option 2	0	0	0	0
Option 3	1 410 000√	1 057 500√	969 375√	564 000√
Total	57 810 000√ o/f	43 357 500√ o/f	39 744 375√ o/f	23 124 000√ o/f

12 marks

- part (d)

Answers may include:
Maximum of one tick per box

	Advantage	Disadvantage
Option 1	Large amount of cash sale made	- Total amount per customer is less than option 3.(£11 750) - May not help sales volume
Option 2	May help sales of the new car	- No immediate cash inflow - Total amount per customer is less than option 3.(£11 750) - Credit given but no interest charged - Risk of bad debts
Option 3	- Total amount received per customer is highest using this option.(£11 975) - May help sales of new car.	- Relatively small amount of cash inflow received at sale - Risk of bad debts

Conclusion
Option 1/2/3 is the best option √√

8 marks

Total 32 marks

➢ Question 5

- part (a) (i)

Fixed Costs	£(3 800 x 2)√ +(5 700 x 6)√ +(2 440 x 6)√ = £56 440 √√√
Variable Costs	(£3.60 + 4.25 + 0.20) √ = £8.05 √
Contribution	£14.95 - £8.05 = £6.90 √ o/f
Break even point	56 440 √ o/f 6.90 √
	= 8 180 units √ o/f √ C

10 marks

- part (a) (ii)

Margin of Safety in units	(8 500 – 8180 o/f) √ = 320 units √ o/f
Margin of safety in sales revenue	(320 o/f x £14.95) √ = £4 784 √ o/f

4 marks

- part (a) (iii)

Sales	8 500 x £14.95 = £127 075 √
Less Fixed Costs	= (£56 440) √ o/f
Less Variable Costs	(£8 500 x 8.05) = (£68 425) √ o/f
= Profit	= £ 2 210 √ o/f
OR	
Contribution x Sales	(8 500 x 6.90 o/f) √ = £58 650 √ o/f
Less fixed Costs	(£56 440) √ o/f
= Profit	£2 210 √ o/f
OR	
Contribution x Margin of Safety	(£6.90 √ o/f x 320 √ o/f)
= Profit	£2 208 √√ o/f

4 marks

- part (b)

Contribution per unit must be	= 56 440 √ o/f = £6.64 √ o/f 8 500 √
Plus Variable costs per unit	= £8.05 √ o/f
Therefore, selling price must be	= £14.69 √ o/f √ C

6 marks

- part (c)

Answers may include:

Maintaining Output and decreasing Selling Price
Advantages – Reducing price may lead to higher sales, √ when trading conditions are tough. √
This may allow SHA Ltd to survive √ until trading conditions improve √ , and competitors to fail. √
No need to lay off any staff if output is not reduced, √ which may involve redundancy costs etc. √

Disadvantages – Reduction in price of £0.26 √ is very little √ and may have no effect on sales. √
SHA Ltd may find they have unsold stock in these difficult conditions. √
Kettles are not a necessity in a downturn √ as substitutes exist √
Break-even point will be higher √ because contribution per unit is lower √
Total sales revenue decreases √

Maintaining Selling Price and decreasing Output
Advantages – Keeping the same selling price may mean SHA Ltd maintains market position √ i.e. does not appear to go down market. √
Avoids build up of unsold stock when trading is difficult √
Could make a loss assembling kettles that cannot be sold, √ so avoids unnecessary expense. √
Break-even point does not decrease √ because contribution per unit does not change.

Disadvantages – Total sales revenue decreases √
Reducing output may see resources wasted/unused √ e.g. materials, staff etc. √
Fixed costs are spread over a smaller output, √ so fixed costs per unit will rise. √

Maximum of 4 marks for arguing one side

Conclusion – 2 marks
Should maintain output (or selling price) and decrease selling price (or output).

8 marks

Total 32 marks

Question 6

- part (a)

Gearing ratio = $\frac{\text{Prior charge capital}}{\text{Capital employed}}$ x 100 √ √

= $\frac{12\ 625\ 000\ √}{12\ 625\ 000\ √ + 22\ 850\ 000\ √}$ x 100 = 35.59% √

6 marks

- part (b) (i)

Return on Capital employed = $\frac{\text{Net profit before interest and tax}}{\text{Capital employed}}$ x 100

= $\frac{£1\ 575\ 000\ √}{£35\ 475\ 000\ √}$ x 100 = 4.44% √

3 marks

- part (b) (ii)

Earnings per ordinary share = $\frac{\text{Net profit after interest and tax}}{\text{Issued ordinary shares}}$

= $\frac{£818\ 000\ √}{30\ 000\ 000\ √}$ = 2.73p per share √

3 marks

- part (b) (iii)

Price/earnings ratio = $\frac{\text{Market price of share}}{\text{Earnings per share}}$

= $\frac{53.0p\ √}{2.73p\ √ \text{ o//f}}$ = 19.4 times √ o/f

3 marks

- part (b) (iv)

Dividend paid per share = $\frac{\text{Total ordinary dividend}}{\text{Issued ordinary shares}}$

= $\frac{£616\ 000\ √}{30\ 000\ 000\ √}$ = 2.05p per share √

3 marks

- part (b) (v)

Dividend cover = Net profit after interest and tax / Total ordinary dividend

= £818 000 √ / £616 000 √ = 1.33 times √

3 marks

- part (b) (vi)

Dividend yield = Dividend per share / Market price of share x 100

= 2.05p √ o/f / 53p √ x 100 = 3.87% √ o/f

3 marks

- part (c)

Answers may include
o/f rule applies

BETTER than Northern Gas plc
Gearing in Southern Gas is better √ as Northern Gas has a ratio higher than 50% benchmark. √
This makes Northern Gas a risky investment,√ they have probably taken out loans, debt capital etc√
ROCE is better √ in Southern Gas by 0.5 percentage points.√ Perhaps the large debt capital of Northern means the returns are lower √ e.g. due to interest payments √

WORSE than Northern Gas plc
Earnings per ordinary share in Northern Gas are about 1 pence √ per share higher which is better √
Perhaps Northern have a smaller equity share base √ which means EPS will be higher. √

Maximum of 4 marks for arguing one side

Conclusion
Southern Gas plc as a business has performed better/worse than Northern Gas plc. √√

8 marks

Total 32 marks

- **Question 7**

- part (a)

Calculation of Purchase Price			
Property, plant and equipment	+ 1 260 000 - 943 000	49 817 000	√
Trade and Other Receivables	Less 5%	729 600	√
Intangibles		5 740 510	
Inventories		4 350 000	
Cash and cash equivalents		12 890	√ need **3**
Bank Loan		(6 000 000)	
Trade and Other Payables		(2 410 000)	
Current tax payable		(1 240 000)	
Short term provisions		(3 000 000)	√ need **4**
Value of Net assets acquired		48 000 000	√ o/f
Purchase price	48 000 000 x 1.5	72 000 000	√ o/f

6 marks

- part (b)

Calculation of goodwill = (72 000 000 o/f -48 000 000 o/f) √ = £24 000 000 √ o/f

2 marks

- part (c)

Amount received per share = $\frac{\text{£72 000 000 o/f}}{\text{24 000 000}}$ = £3.00 per share √ o/f

Cash received per share = £3.00 - ((4 x 0.50) + (4 x 0.22)) premium)
Cash received per share = £3.00 - (£2.00 √ + 88 p premium √) = 12 pence per share held √

4 marks

- part (d)

Statement of Financial Position
Sheung Wan Construction plc as at January 1st 2014

Assets			**£**
Non-current Assets			
Property, plant and equipment	829 817 000	√	
Intangible assets (16000000 +5 740 510)√ + 24 000 000 √	45 740 510	√√	
			875 557 510
Current Assets			
Inventories	22 850 000		
Trade Receivables (12 540 000 + 729 600)	13 269 600	√ (2)	
Cash (7 286 000 + 12 890)√ – 2 880 000√	4 418 890	√√	
			40 538 490
Total Assets			**916 096 000**
Equity and Liabilities			
Equity			
Ordinary Shares of £0.50 each	548 000 000	√	
Share Premium(200000000√+21120000√)	221 120 000	√√	
Retained earnings	44 955 000	√	
			814 075 000
Non-current liabilities			
6.5% Debenture 2017	25 000 000		
Bank Loan	56 000 000	√ (2)	
			81 000 000
Current Liabilities			
Trade Payables	14 060 000		
Current tax payable (2721000 + 1240000)	3 961 000		
Short term provisions	3 000 000	√ (3)	
			21 021 000
Total Equity and Liabilities			**916 096 000**

12 marks

- part (e)

Answers may include

FOR purchase
Goodwill received √ Profit on realisation √ 745 600 √ o/f
£3.00 received per share which is £0.70 √ more than the share in Ngau Builders plc trading at £2.30 √
Larger firm may achieve benefits √ eg economies of scale √ and share price in Sheung Wan plc may rise in future. √
Horizontal integration √
Large liabilities on Ngau builders Statement of Financial Position √ which another company can settle √
Sheung Wan has a healthier Statement of Financial position √ and is therefore a safer investment. √
Reduces competition √

AGAINST purchase
Larger firm may lead to problems √ eg diseconomies of scale √ and share price in Sheung Wan may fall in future. √
Reduced power of shareholder from Ngau Builders plc, √ as large numbers of other shareholders in Sheung Wan Limited. √
No control in new company √

Maximum of 4 marks for arguing one side.

Conclusion
Purchase is beneficial/ not beneficial. 2 marks

8 marks

Total 32 marks

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