



**2012 Accounting**

**Advanced Higher – Solutions**

**Finalised Marking Instructions**

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## 2012 ADVANCED HIGHER ACCOUNTING

### MARKING CONVENTIONS

CONVENTION	EXPLANATION	MARK(S) ON CANDIDATES PAPER
Extraneous	Items entered which should not be in the answer	-1E
Consequential	If a figure in a question is wrong, any further calculations are awarded marks if correct, as a consequence of using that figure	C
Nomenclature	The details in an account are wrong/missing	-1N
Dates	The date of an entry is wrong/missing	-1D
Complete Reversal	<b>All</b> the ledger entries are made the wrong way round  The question is marked as if correct and then the total mark is divided by 2	R  eg Total Mark = 12 Divided by 2 Mark awarded = 6
Plus/Minus Rule	If an entry is shown correctly it is awarded the mark (+)  If the same entry then appears in another part of the question the mark is deducted (-)  ie no mark is gained and there is no penalty	eg  Correct entry £60,000 Sales in the Trading Account – Mark awarded 1 (+)  Wrong entry £60,000 Sales also entered in the Balance Sheet – Mark deducted -1 (+-)
Penalty	The answers given are more than required (4 given instead of 3) and one of them is wrong  A heading is wrong/missing from a final account  The answer is correct but not given in the format requested ie the question asks for an account or a statement and a list is given	-1P

## GENERAL INSTRUCTIONS

- 1 Assess pencil figures and working. If the script is predominantly in pencil refer to the Principal Examiner.
- 2 A maximum of 10% of marks gained on any individual question may be deducted for untidy work and poor style. This penalty should only be applied in exceptional circumstances.
- 3 Work which has been deleted gains no marks, even if correct. Exceptional cases may be drawn to the attention of the Principal Examiner.
- 4 Consequential errors **MUST NOT** be penalised, subject to the marking instructions for each question.
- 5 Mark workings whether or not they are incorporated into the final answer. Deduct a penalty of -1 mark per question for working which is not incorporated in the final answer.
- 6 Incorrect figures, supported by adequate workings – award marks for any correct operations performed.
- 7 Incorrect figures, not supported by adequate workings – lose awards, unless the marking instructions specify otherwise. If arithmetic error lose 1 mark.
- 8 **EXTRANEIOUS ITEMS** – see instructions for specific questions.
- 9 If right and wrong – give value of award where figure is correct, deduct value of award where figure is wrong (cross reference +/- against relevant figures).
- 10 Indicate awards given for each item next to the appropriate figure eg £1500<sup>1</sup>

In essay type questions indicate the marks awarded beside the point made by the candidate – **NOT IN THE MARGIN.**

Sub-totals for each section should be indicated and encircled,  $\textcircled{5/6}$

Final totals should be clearly indicated and easy to check, eg Q1 = 42/50.

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**SECTION A**

**Question 1**

**Working Notes**

**DISTRIBUTION OF EXPENSES**

	COGS	Admin	Distrib	
Wages and Salaries 42,200 + 1,500 = 43,700	20% 8,740	40% 17,480	40% 17,480	<b>1 each</b>
Rent and Rates 15000 – 5800 = 9200	50% 4,600	20% 1,840	30% 2,760	<b>1 each</b>
Depreciation Machinery 25% of 400000 = 100000	70% 70,000		30% 30,000	<b>1 each</b>
Depreciation Delivery Vans 15% x (125,000 – 9,000)			17400	<b>1</b>

**Part A**

**(a) (i) Cost of Sales**

Opening Stock	14,605	
Add Purchases	217,500	
	<u>232,105</u>	
Less Closing Stock	25,500	
	<u>206,605</u>	<b>1</b>
Wages and Salaries	8,740	<b>1</b>
Rent and Rates	4,600	<b>1</b>
Depreciation of Machinery	70,000	<b>1</b>
Cost of Sales	<u>289,945</u>	<b>(4)</b>

**(ii) Distribution Expenses**

Wages and Salaries	17,480	<b>1</b>
Rent and Rates	2,760	<b>1</b>
Sundry Dist Exps	17,825	<b>1</b>
Depn Del Vans	17,400	<b>1</b>
Depn Mach	30,000	<b>1</b>
Vehicle Exps	4,220	<b>1</b>
Total	<u>89,685</u>	<b>(6)</b>

**(iii) Administration Expenses**

Wages and Salaries	17,480	1
Rent and Rates	1,840	1
Directors emoluments	6,100	} 1
Sundry Admin Exps	7,980	
Audit Fees	10,200	1
Discounts (net)	<u>- 700</u>	1
Total	42,900	<b>(5)</b>

**Investment Income**

Investment Income	4,500	1
Bank Interest	<u>2,300</u>	1
	6,800	<b>(2)</b>
Debenture Interest = 100 000 * 10% = 10,000		1

**Dividends**

Preference Dividend = 10% of 100,000 =	10,000	1
Ordinary Dividends		
Final = 375,000*3p =	<u>11,250</u>	2
	21,250	<b>(3)</b>

**(b) MATTHEWS PLC****Profit and Loss Account for year ended 31 December Year 2**

	£	£	
Turnover		525,700	1
Less Cost of Sales		<u>289,945</u>	1
Gross Profit		235,755	
Less Expenses			
Distribution	89,685		1
Administration	<u>42,900</u>	<u>132,585</u>	1
Operating profit		103,170	1
Investment Income		<u>6,800</u>	2
		109,970	
Interest payable		<u>10,000</u>	1
Profit on ordinary activities		99,970	1
Corporation Tax on ordinary activities		<u>45,400</u>	1
Profit after tax		54,570	1
Dividends		<u>21,250</u>	3
Retained Profits		<u>33,320</u>	<b>(14)</b>

**MATTHEWS PLC**  
**Balance Sheet as at 31 December Year 2**

	£	£	
<b>Fixed Assets</b>			
Tangible Assets		373,600	<b>2</b>
Investments		<u>100,000</u>	<b>1</b>
		473,600	
<b>Current Assets</b>			
Stock	25,500	}	1
Debtors	10,940		
Bank	12,575		
Prepayments	<u>5,800</u>		
	54,815		
<b>Creditors: amounts falling due within one year</b>			
Trade Creditors	9,330	}	1
Accruals	11,700		
Corporation Tax	45,400		1
Debenture Interest due (10,000 – 5,000)	<u>5,000</u>		1
	71,430		
<b>Net Current Assets</b>		<u>– 16,615</u>	<b>1 for label</b>
<b>Total Assets less Current Liabilities</b>		456,985	<b>1 for label</b>
<b>Creditors: amounts falling due after one year</b>		<u>100,000</u>	<b>1</b>
<b>Net Assets</b>		<u>356,985</u>	
<b>Capital and Reserves</b>			
Called up capital	287,500		1
<b>Share Premium</b>	30,900		1
Reserves (5,265 + 33,320)	<u>38,585</u>		1
		<u>356,985</u>	<b>(13) (27)</b>

**Working Notes**

Tangible Assets	<b>Machinery</b>	<b>Del Vans</b>	<b>Total</b>
Cost 1 January Year 2	400,000	125,000	525,000
Less Prov for Depn			
1 Jan Year 2	25,000	9,000	34,000
Change for year	<u>100,000</u>	<u>17,400</u>	<u>117,400</u>
	125,000	26,400	151,400
Net Book Value	275,000 <b>1</b>	98,600 <b>1</b>	373,600

**PART B**

**(a) Earnings per share**

$$\frac{\text{Net Profit after Tax – Preference Dividends}}{\text{Number of Ordinary Shares}}$$
$$\frac{54,570 - 10,000}{375,000} = \frac{44,570}{375,000} = 0.1199 \approx 12 \text{ p per share}$$

**(3)**

**(b) Price Earnings Ratio**

$$\frac{\text{Market Price per share}}{\text{Earnings per share}}$$
$$\frac{1.2}{0.12} = 10 \text{ times}$$

**(2)**

**(c) Dividend Yield**

$$\frac{\text{Ordinary dividend per share} \times 100}{\text{Market Price per share}}$$
$$\frac{0.03 \times 100}{1.2} = 2.50\%$$

**(3)** **(8)**

**(50 marks)**

## Question 2

### WORKING NOTES

	£	£	
SALE OF M Vehicle			
Cost		7500	
Depn Y1 (7500 x 20%)	1500		
Depn Y2 (7500 x 20%/2)	<u>750</u>		1
NBV	5250		
Cash recd	<u>5000</u>		1
Loss	<u><u>250</u></u>		(3)

### Calculation of Credit Sales

Opening balance	32,000		1
Add Credit Sales	<b>160,740</b>	192,740	
Less			
Cheques received	159,000		1
Discounts allowed	2,300		
Bad Debts (4,300 – (4300*0.2))	3,440		1
Closing Balance	28,000	192,740	1

### Calculation of Total Sales

Credit Sales	160,740		
Cash sales	75,500		1
Add Cash takings not banked			
Drawings (52*200)	10,400		1
Purchases	3,200	}	1 for both
Repairs to buildings	<u>2,900</u>		
Total Sales	<b>252,740</b>		(7)

### Calculation of Purchases

Opening Balance		22,600	1
Add Credit Purchases		120,745	
Bank		123,400	} 1 for both
Discount		745	
Closing balance		19,200	1
Credit purchases		120,745	
Add Cash purchases		<u>3,200</u>	1
		123,945	
Less drawings			
400*4/5		<u>320</u>	2
		<u><u>123,625</u></u>	(6)

### CALCULATION OF DEPRECIATION

	Cost	Agg Depn		
		Year 1	Year 2	
Motor Vehicle Jan-Jun	25,000	5,000	2,500	1
MV July-Dec	17,500		<u>1,750</u>	1
Depreciation for Year 2			<u><u>4,250</u></u>	(2)



**(a) Trading and Profit and Loss Account of L Smith for year ended 31 December Year 2**

	£		£	£	
Sales				252,740	7
Less Cost of Sales					
Opening Stock	32,600	1			
Add Purchases	<u>123,625</u>	6	156,225		
Less Closing Stock			<u>29,500</u>	1	126,725
Gross Profit				<u>126,015</u>	
Add Discount received				745	1
				<u>126,760</u>	
Less Expenses					
Rates			2,400	1	
Wages and Salaries (42500 – 500)			42,000	1	
Electricity (1860 + 75)			1,935	1	
Insurance 5500 + 240 – 300			5,440	2	
Repairs to buildings			2,900	1	
Bad Debts (4300 – 860)			3,440	1	
Discount allowed			2,300	1	
Provision for Bad Debts (5% x 28000)			1,400	1	
Provision for depreciation					
Motor Vehicles			4,250	2	
Loss on sale of Motor vehicle			<u>250</u>	3	
				<u>66,315</u>	
Net Profit				<u>60,445</u>	(30)

**(b) (i) Net Book Value of Motor Vehicles – 31 December Year 2**

			Cost	
Motor Vehicles at cost Year 1			25,000	
Less Cost of Vehicle sold Year 2			<u>7,500</u>	
Cost of Motor Vehicles			17,500	1
Less Depreciation				
Year 1	5,000			
Year 2 (25,000 x 20% x 0.5)	2,500	1		
Year 2 (17,500 x 20% x 0.5)	<u>1,750</u>	1		
	9,250			
Less Depreciation on Vehicle sold				
Year 1 7500 x 20%	1,500	} 1 for both		
Year 2 7500 x 20% * 0.5	<u>750</u>			
	2,250		<u>7,000</u>	
Net Book Value of Motor Vehicles			<u>10,500</u>	(4)

**(ii) Bank Balance**

Bank overdraft			22,500	1
Add Receipts			<u>264,500</u>	} 1 for both
			242,000	
Less Payments			<u>175,660</u>	
Closing Balance			66,340	(2)

**(iii) Closing Capital figure**

Capital at start	289,240	1		
Add Additional Capital	25,000	1		
Add Net Profit	<u>60,445</u>		374,685	1
Less Drawings (10,400 + 320)			<u>10,720</u>	
				363,965
				1
				(4) (10)

(40 marks)

### Question 3

#### PART A

(i) + (ii)

#### NET CASH INFLOW FROM OPERATING ACTIVITIES

	Working Notes	£000s	£000s	
Operating Profit (before interest and tax)	80 + 10 + 20 + 25		135	4
<b>Non Cash Adjustments:</b>				
Add Depreciation for year	100 + 30		130	2
			<u>265</u>	
Add Loss on sale of Equipment	75 – 40 = 35 – 30 = 5		5	3
Add Loss on sale of Vehicles	20 – 5 = 15 – 10		5	3
Less Profit on sale of premises	50 – 100 = 50		<u>- 50</u>	3
			225	
<b>Changes in Working Capital</b>				
Stock increase			- 20	1
Debtors decrease			30	1
Creditors increase			20	1
Net Cash inflow from operating activities			<u>255</u>	(18)

#### CASH FLOW STATEMENT FOR YEAR ENDED 30 JUNE YEAR 3

		£000s	£000s	
Net Cash inflow from operating activities			255	1
<b>Returns on Investments and Servicing of Finance</b>				
Debenture Interest paid			<u>- 10</u>	1
			245	
Taxation	30 + 25 – 40		<u>- 15</u>	3
			230	
<b>Capital Expenditure and financial investments</b>				
Buildings		150		1
Equipment		200		1
Vehicles		<u>60</u>	- 410	1
<b>Sale of Fixed Assets</b>				
Buildings		100		1
Equipment		30		1
Vehicles		<u>10</u>	140	1
<b>Equity Dividends paid</b>				
			<u>- 20</u>	1
			- 60	1
<b>Management of liquid resources and financing</b>				
Decrease in Cash/Bank during year			<u>0</u>	
			<u>- 60</u>	(13)
				(31)

**PART B**

**(i) + (ii)**

Funds Required:	£		
Factory expansion	500,000	1	
Overdraft to clear	100,000	1	
Bank Balance required	150,000	1	
Total cash required	<u>750,000</u>	1	
Less Debenture	<u>300,000</u>	1	
Raised from share issue	450,000		
	£		
Total cost per share £450,000/600000	0.75	1	
Less nominal value	0.50	1	
Share premium per share	0.25	2	(9)

**(40 marks)**

#### Question 4

**Businesses use accounting ratios to compare their results of one year against those of another or to compare their results with those of a competitor.**

**(a) Identify and describe areas of financial performance that a Finance Manager might consider.**

The aspects of a financial performance considered by the Finance Manager would be:

Profitability ratios.

- These ratios analyse whether the business has met its objectives.
- Focus on how well a firm is performing.
- They measure the effectiveness of a firm's ability to make profits.
- They analyse the profit margin and indicate any changes in specific performances or expenses from year to year.

Liquidity ratios measure the firm's short term ability to meet its liabilities.

Efficiency ratios

- Give an indication of how well the business enterprise has used its assets and controlled its debts.
- Efficiency ratios will compare average stock, rate of stock turnover, debtors collection period, creditors payment periods and the use of fixed assets.
- Are used to examine how well a business is using its fixed assets and liabilities within the business.

**One mark for identifying each area and one mark for description. (6)**

**(b) Select 2 of these areas of performance and discuss 2 ratios for each that a Finance Manager might calculate and indicate their significance.**

#### **PROFITABILITY RATIOS:**

Return on Capital Employed:

- Shows Profit business earns on the capital invested. **(2)**
- Return on capital influenced by
  - the pricing policy employed **(2)**
  - efficiency of the day-to-day running of the business **(2)**
  - efficiency with which the assets are being used **(2)**

Gross Profit Ratio:

- Shows profits earned from purchasing goods at one price and selling them at a higher price. **(2)**
- Shows the profit earned on every £100 of sales. **(2)**
- Gross profit is related to the price charged for the goods. If the price increases, so will the gross profit. **(2)**
- Gross profit ratio will be related to the Mark-up the business applies. **(2)**
- An interesting trend relating to the Gross Profit percentage is that if business trends are steady the Gross Profit Percentage will be constant. **(2)**
- Reductions in Gross Profit may result from poor purchasing policy, stock losses or theft of cash. **(2)**

Mark-up Ratio:

- This is the percentage added to the cost price to calculate the selling price. **(2)**
- This depends on the pricing policy of the business and any changes in this will affect the gross and net profits. **(2)**

Net Profit Ratio:

- This is the profit earned by the business after all the expenses have been met. **(2)**
- Often regarded as the most important single measure of a business's performance. **(2)**
- Shows the overall efficiency of the business in its day-to-day running. **(2)**
- An increase in Net Profit percentage could arise because of an increase in mark-up or increases achieved by the business controlling its expenses more efficiently. **(2)**
- Show the net profit earned for every £100 of sales made. **(2)**
- Significant changes in Net Profit percentage may lead to investigations of expenses ratios to identify possible problem areas. **(2)**

### **LIQUIDITY RATIO:**

Current Ratio:

- The current assets of the business should be sufficient to enable the business to carry on trading if all the current liabilities were paid off. **(2)**
- Compares assets which will become liquid within a year with the liabilities which will be due for payment in the same period. **(2)**
- Current ratio could be artificially high if too much stock was being held, meaning that the business was not using its money efficiently. **(2)**
- Different types of businesses will quote different optimum ratios depending whether trade is mostly in cash or credit. **(2)**

Acid Test Ratio:

- Shows the ability of the firm to meet its debts from liquid funds. **(2)**
- Shows the ability of the firm to pay its creditors, taxation, dividends and other current liabilities from cash in hand, at bank, received from debtors and sale of listed investments.
- Liquidity ratio should be generally 1:1. **(2)**
- Poor liquidity ratio may result from persistent losses or overtrading. **(2)**

### **EFFICIENCY RATIO:**

Turnover to Fixed Assets:

- This measures how productive the fixed assets employed in the business are at generating sales income or turnover. It will show how much turnover is generated for every £1 of fixed asset employed in the business. **(2)**
- An enterprise will be interested in this ratio, particularly if they have invested in fixed assets, to see if the increase in fixed assets have been worthwhile and generated an increase in turnover. **(2)**
- This ratio indicates a trend in performance and needs to be considered along with other ratios before effective conclusions can be drawn. **(2)**

#### Expense Ratios:

- These enable an accountant to compare every expense with the same expense from the previous year. **(2)**
- By converting the actual amount paid to a percentage the expenses can be compared on the same basis. **(2)**
- The accountant can therefore see whether they have risen abnormally and to take action. **(2)**
- Useful to calculate these if significant changes in Net Profit is not related to changes in Gross Profit Percentage. **(2)**

#### Rate of Stock turnover:

- The Rate of Stock Turnover figure is very important because it is at the point where the stock turns over that the profits are made. **(2)**
- The higher the rate of the stock turnover the greater should be the profits of the firm. **(2)**
- Rate of stock turnover is expressed as a number followed by the word times eg if the rate of stock turnover was 6 times a year this would mean that the stock had been sold every two months. **(2)**
- Rate of turnover a firm achieves can vary depending on the type of business, a jeweller will have a much lower turnover than a supermarket. **(2)**

#### Debtors Collection Period:

- This measures the time taken by our debtors to pay their debts. **(2)**
- It can be expressed in days, weeks or months. **(2)**
- It is an indication of how efficient the business enterprises credit control system is operating. **(2)**
- Can affect ability to pay creditors. **(2)**

#### Creditors Payment Period:

- This is the length of time it takes the enterprise to pay its creditors. **(2)**
- It can be expressed in days, weeks or months. **(2)**
- If the period is too long the business runs the risk of having credit refused which could affect their ability to trade. **(2)**
- Ability to pay creditors may be affected by the Debtors ratio. **(2)**

**(16)**

**(c) Discuss the limitations of ratio analysis when carrying out an inter-firm comparison.**

- Inter-firm comparisons are limited to the information content of the published accounts. **(2)**
- Comparisons between companies for a time period may be misleading if different accounting policies are used. **(2)**
- Comparisons are based on historical cost data, not current information and may be distorted by inflation. Eg how fixed assets are valued in each firm. This may influence on the return on capital figures. **(2)**
- Data needed to calculate some ratios are not disclosed by the published accounts and aggregate figures may have to be used eg aggregate cash and credit sales to calculate debtors collection period. **(2)**
- Investigations need to be carried out to determine whether the ratio is 'good' or 'bad' eg Gross Profit to Sales percentage may have risen but the actual gross profit may have fallen due to reduction in sales as a result of higher selling price. **(2)**
- *Does not show non-financial matters* **(2)**
- *Must be compared with businesses of similar size (1) or nature (1)*
- Figures used to calculate ratios may not reflect typical situations eg reduction in stock levels for stocktaking will increase reported rate of stock turnover and reduce reporting working capital figures compared with their 'true' values. **(2)**
- When comparing different years, there may be a very different economic climate and an apparently poorer return on capital may represent a good performance by management in the circumstances. **(2)**
- Comparisons with past performance cannot demonstrate whether the performance is actually acceptable – it may simply be better than a poorer previous figure. **(2)**

**(8)**

**(30 marks)**

## Question 5

**Social Accounting is a diverse activity mainly concerned with offering a complementary form of accounting as opposed to the more usual economic and profit orientated accounting.**

**(a) Describe what is meant by the term Social Audit.**

- A social audit is the process carried out by a business which assesses its social, economic, and environmental benefits and limitations. **(2)**
- Audit of the non-financial objectives of the organisation and the impact they have on the environment. **(2)**
- Social Audit will involve the stakeholders – employees, clients, volunteers, funders, contractors, suppliers, local residents – those people interested in the organisation. **(2)**
- Audit carried out regularly for both internal and external groups. **(2)**
- Audit may impact on the activities of the business. **(2)**

**(6)**

**(b) Outline the social and environmental issues an organisation may wish to report on.**

Organisations may wish to report on how they are meeting their objectives:

Human resources development

- Be good employer and manage human resources efficiently. **(2)**
- Be a valued employer and provide good working environment. **(2)**
- Be fair and progressive and encourage learning and understanding. **(2)**
- Empower employees. **(2)**

Environmental impact

- Pollution. **(2)**
- Waste disposal and the hidden costs involved. **(2)**
- Sustainability. **(2)**
- Adopt environmentally friendly practices. **(2)**
- Operate good working practices in running the business. **(2)**
- Minimise their negative impact on the environment. **(2)**
- Reducing energy consumptions and carbon footprint. **(2)**

Fair trade activities

- Adopt fair trade practices. **(2)**
- Treat customers and suppliers fairly. **(2)**

Economic development by:

- providing local environment opportunities **(2)**
- giving start-up help **(2)**
- providing premises for small businesses **(2)**
- providing training and learning opportunities. **(2)**



### Community Support

- Providing services to local community groups and association. (2)
- Support and benefit local community activities. (2)
- Financial assistance to local groups. (2)

### Local Economy

- Support and stimulate the local economy. (2)
- Employing locals. (2)
- Purchasing goods and services locally. (2)

### Community Regeneration

- Working in partnership with other organisations/agencies. (2)
- Working in partnership with other service providers. (2)
- Setting up joint ventures. (2)

### Inclusion

- Promote the inclusion of disadvantage groups. (2)
- Taking account of cultural and language differences. (2)

### Volunteering

- Providing a wide range of student placement opportunities. (2)
- Promote/encourage volunteering. (2)

### Image

- Promote a positive image of their premises. (2)
- Emphasise local achievements. (2)
- Generate positive media coverage. (2)

(16)

### (c) Describe the benefits to an organisation of adopting a Social Accounting Policy.

- Gives the organisation a method of obtaining a holistic and regular process of examining how it is performing and what its effects are on people, communities and the environment. (2)
- Stakeholders can be involved in the social accounting process and feed their perspectives into the organisation's planning. (2)
- Stakeholders can read/request special accounts to know more about the organisation and therefore use them as opposed to another business organisation. (2)
- Can help feed into strategic planning offering organisation opportunity to review its strengths and areas for improvement. (2)
- Organisation can choose which aspects to report on and show where they are making progress. This may affect prospective customer's decisions. (2)
- Having a verified and comprehensive statement of the organisation's impact and performance can help reporting to investors/stakeholders and in preparing annual reports. (2)

(8)

(30 marks)

**SECTION B**

**Question 6**

**PART A**

Workings:

33.0	35.0	37.0	39.0	41.0	43.0
5.0	7.0	8.5	9.5	10.5	12.0
17.0	21.0	18.0	20.0	19.0	23.0
55.0	63.0	63.5	68.5	70.5	78.0
55000	63000	63500	68500	70500	28000

**(a)** **(8)**

Year	Old Costs	New Costs	Net Cash Savings		Cumulative Savings	12% DF	NPV		For Information: 15% DF NPV	
1	150000	55000	<b>95000</b>	<b>2</b>	95000	0.893	84835	<b>1</b>	0.870	82650
2	165000	63000	<b>102000</b>	<b>1</b>	197000	0.797	81294	<b>1</b>	0.756	77112
3	181500	63500	<b>118000</b>	<b>1</b>	315000	0.712	84016	<b>1</b>	0.658	77644
4	199650	68500	<b>131150</b>	<b>1</b>	446150	0.635	83280	<b>1</b>	0.572	75018
5	219615	70500	<b>149115</b>	<b>1</b>	595265	0.567	84548	<b>1</b>	0.497	74110
6	241577	28000	<b>213577</b>	<b>2</b>	808842	0.507	108283	<b>1</b>	0.432	92265
			<b>808842</b>				526257			478799
					Less Initial Investment (Year 1)		480000	<b>2</b>		480000
<b>(b) (iii)</b>	<b>Net Present Value</b>						<b>46257</b>	<b>2</b>		<b>- 1201</b>

**(i) Payback** **4 Years** 446150 **2**  
**83 Days**  $\frac{(480000 - 446150) \times 365}{149,115}$  **2** **(4)**

**(ii) Average Profit** 134807 808842/6 **2**  
**ARR** **28%** 134807/480000 x 100 **2** **(4)**

**(c) IRR** **14.92%**  $12\%(1) + 46257 / (46257 + 1201) \times 3\%(1)$  **6** **(6)**

**PART B**

<u>Sales of Product M (in units)</u>		Price
January	6,000	£12
February	7,200	£12
March	8,600	£10
April	9,500	£10
May	8,000	£10

Materials 2 kg per unit  
Price £3.40 per kg

**Budgets for Year 3:**

(a)	January	February	March	April	
<b>SALES BUDGET</b>					
<b>Unit Sales</b>					
Cash	3,000	3,600	4,300		
Credit	3,000	3,600	4,300		
<b>Total Sales Units</b>	<b>6,000</b>	<b>7,200</b>	<b>8,600</b>	<b>1</b>	
<b>Sales Value</b>					
Cash	£34,200	£41,040	£40,850		
Credit	£36,000	£43,200	£43,000		
<b>Total Sales Value</b>	<b>£70,200</b>	<b>£84,240</b>	<b>£83,850</b>		<b>(7)</b>

(b)	January	February	March	April	
<b>PRODUCTION BUDGET (UNITS)</b>					
Current Month's Sales	6,000	7,200	8,600	9,500	
Next Month's Sales	7,200	8,600	9,500	8,000	
<b>Production</b>					
40% of Current Month	2,400	2,880	3,440	3,600	
60% of Next Month	4,320	5,160	5,700	4,800	
<b>Total Production</b>	<b>6,720</b>	<b>8,040</b>	<b>9,140</b>	<b>8,600</b>	<b>(6)</b>
<b>ALTERNATIVE</b>					
Sales	6,000	7,200	8,600		
Stock at end	<u>4,320</u>	<u>5,160</u>	<u>5,700</u>		
	10,320	12,360	14,300		
Less Stock at start	<u>3,600</u>	<u>4,320</u>	<u>5,160</u>		
<b>PRODUCTION</b>	<b><u>6,720</u></b>	<b><u>8,040</u></b>	<b><u>9,140</u></b>		

(c)	January	February	March	April	
<b>MATERIALS PURCHASES BUDGET (KG AND VALUE)</b>					
Next Month's Production	8,040	9,140	8,600		
<b>Material (kg)</b>	<b>16,080</b>	<b>18,280</b>	<b>17,200</b>	<b>1</b>	
<b>Total Cost</b>	<b>£54,672</b>	<b>£62,152</b>	<b>£58,480</b>	<b>1 for line</b>	<b>(5)</b>

(50 marks)

**Question 7**

**PART A**

**(a) (i) Process 3 Equivalent Production Statement – May Year 4**

<b>Inputs</b>		<b>Units (Kg)</b>							
Work in Progress		2000							
Materials		30000							
		32000							
				<b>Materials</b>		<b>Labour</b>		<b>Overheads</b>	
<b>Outputs</b>									
Normal Losses		1600	<b>1</b>						
Finished Goods		27400		27400		27400		27400	<b>1</b>
Work In Progress		3000		3000	<b>1</b>	1800	<b>2</b>	1500	<b>2</b>
		32000							
<b>Equivalent Units Produced</b>				<b>30400</b>		<b>29200</b>		<b>28900</b>	<b>(7)</b>

**(ii) Process 3 Production Cost Statement – May Year 4**

	<b>Materials</b>		<b>Labour</b>		<b>Overheads</b>		<b>Total</b>
	<b>£</b>		<b>£</b>		<b>£</b>		
Transferred In Costs	2460		848		515	<b>1 line</b>	
Incurred during Month	47700	<b>2</b>	12000		9600	<b>1</b>	
Total Cost for Month	50160		12848		10115		
Equivalent Units Produced	30400	<b>1</b>	29200	<b>1</b>	28900	<b>1</b>	
<b>Cost per Equivalent Unit</b>	<b>£1.65</b>		<b>£0.44</b>		<b>£0.35</b>		<b>£2.44 (7)</b>

**(b) Process 3 Account – May Year 4**

<b>Inputs</b>				<b>Outputs</b>				
	<b>Kg</b>	<b>£ Per Kg</b>	<b>£</b>		<b>Kg</b>	<b>£ Per Kg</b>		<b>£</b>
Work in Progress	2000		3823	Normal Loss	1600	<b>1</b>		
Material A	9000	1.00	9000	Finished Goods	27400	<b>1</b>	2.44	<b>1</b> 66,856.00
Material A	11000	1.70	18700	Work in Progress	3000			6,267.00 <b>2</b>
Material B	10000	2.00	20000					
Labour			12000					
Overheads			9600					
			£73,123					£73,123 <b>(6)</b>

### Process 3 Equivalent Production Statement – May Year 4

Inputs		Units (Kg)		
Work in Progress				
Materials				
Outputs		Materials	Labour	Overheads
Normal Losses	1600			
Abnormal Losses	1600	1600	1600	1600
Finished Goods	25800	25800	25800	25800
Work in Progress	3000	3000	1800	1500
	32000			
<b>Equivalent Units Produced</b>		<b>30400</b>	<b>29200</b>	<b>28900</b>

### Process 3 Production Cost Statement – May Year 4

	Materials £	Labour £	Overheads £	Total
Transferred In Costs	2460	848	515	
Incurred during Month	47700	12000	9600	
Total Cost for Month	50160	12848	10115	
Equivalent Units Produced	30400	29200	28900	
<b>Cost per Equivalent Unit</b>	<b>£1.65</b>	<b>£0.44</b>	<b>£0.35</b>	<b>£2.44</b>

### (c) Process 3 Account – May Year 4

Inputs				Outputs			
	Kg	£ Per Kg	£		Kg	£ Per Kg	£
Work in Progress	2000		3,823.00	Normal Loss	1600		
Material A	9000	1.00	9,000.00	Abnormal Loss	1600	1 2.44	3,904.00
Material A	11000	1.70	18,700.00	Finished Goods	25800	2.44	2 62,952.00
Material B	10000	2.00	20,000.00	Work in Progress	3000		6,267.00 1
Labour		0	12,000.00				
Overheads			9,600.00				
			£73,123.00				£73,123.00 (4)

**PART B**

(a) (i) Note shaded areas for working only – not required in answer

Joint Costs £45,000

Product	Units	Selling Price per Unit	Cost per Unit	Profit per Unit	Total Profit
S	3000	20	£10.00	£10.00	3000
T	1500	35	£10.00	£25.00	37500
	4500				67500

(ii)

Product	Units	Sales Value	Cost per £ of Sales Value	Apportioned Costs	Cost per Unit	Profit per Unit	Total Profit
S	3000	60000	0.4	24000	£8.00	£12.00	36000
T	1500	52500	0.4	21000	£14.00	£21.00	31500
	4500	112500					67500

(b)

Product	Units	Selling Price per Unit	Cost per Unit	Profit per Unit	Total Profit
S	4000	20	10.5	9.5	38000
T	2000	35	10.5	24.5	49000
	6000				87000

Product	Units	Sales Value	Cost per £ of Sales Value	Apportioned Costs	Cost per Unit	Profit per Unit	Total Profit
S	4000	80000	0.42	33600	£8.40	£11.60	46400
T	2000	70000	0.42	29400	£14.70	£20.30	40600
	6000	150000					87000

(40 marks)

### Question 8

Workings:

<b>Sales</b>	<b>January</b>		<b>February</b>		<b>March</b>	
Opening Stock	2,000		2,500		2,800	
Production	28,000		24,000		32,000	
Closing Stock	2,500		2,800		4,000	
<b>Sales in Units</b>	<b>27,500</b>		<b>23,700</b>		<b>30,800</b>	
<b>Sales in Cartons</b>	<b>1,100</b>	<b>1</b>	<b>948</b>	<b>1</b>	<b>1,232</b>	<b>1</b>
<b>Sales Value</b>						
At £175 per carton	175,000	1	165,900	1	175,000	1
At £150 per carton	15,000	1			34,800	1
	<b>£190,000</b>		<b>£165,900</b>		<b>£209,800</b>	

#### Variable Costs

Direct Materials	56,000		48,000		64,000	
Direct Labour	28,000		24,000		32,000	
Variable Overhead	28,000		24,000		32,000	
	<b>£112,000</b>		<b>£96,000</b>		<b>£128,000</b>	

#### Fixed Overheads

Absorbed	£33,600		£28,800		£38,400	
Actual	£30,000		£29,000		£33,000	
Over/Under(-) Absorbed	£3,600		– £200		£5,400	

#### Unit Costs:

Materials	£2
Labour	£1
Overhead	£1

#### Fixed Costs per Unit

£1.20

#### (a) Marginal Costing Profit Statements

	<b>January</b>	<b>February</b>	<b>March</b>		
Sales	£190,000	£165,900	£209,800	<b>9</b>	(8 from working) (1 for entry)
Less					
Opening Stock	£8,000	£10,000	£11,200	<b>1</b>	
Add Variable Costs	£112,000	£96,000	£128,000	<b>3</b>	
Less Closing Stocks	£10,000	£11,200	£16,000	<b>3</b>	
	£110,000	£94,800	£123,200		
Contribution	£80,000	£71,100	£86,600	<b>2</b>	
Less Fixed Costs	£30,000	£29,000	£33,000	<b>3</b>	
Profit	£50,000	£42,100	£53,600	<b>(21)</b>	

**(b) Absorption Costing Profit Statements**

	<b>January</b>	<b>February</b>	<b>March</b>	
Sales	£190,000	£165,900	£209,800	<b>1 for line</b>
Less				
Opening Stock	£10,400	£13,000	£14,560	<b>3</b>
Add Variable Costs	£112,000	£96,000	£128,000	<b>3</b>
Add Fixed Overhead				
Absorbed	£33,600	£28,800	£38,400	<b>3</b>
Less Closing Stocks	£13,000	£14,560	£20,800	<b>3</b>
	£143,000	£123,240	£160,160	
	£47,000	£42,660	£49,640	
Over/Under(-) Absorbed				
Fixed Overhead	£3,600	– £200	£5,400	<b>6</b>
Profit	£50,600	£42,460	£55,040	<b>(19)</b>

**(40 marks)**



### Question 9

- (a) A limiting factor exists if there is a shortage of any resource needed for production (2) or sale of a given product or range of products.  
Managers then have to make decisions relating to the best use of such resources, (2) restricting (or possibly ceasing) the production of some products in favour of others, (2) in order to maximise profits. (2)  
Examples of limiting factors include shortages of:  
machine-hours  
labour-hours  
materials  
skilled labour  
working capital  
storage space  
**1 mark each for examples – max 2 marks** **Max 8**
- (b) Calculate the contribution earned per unit of each product (2). From this calculate the contribution earned per unit of the scarce resource for each for each product, (2) eg contribution per machine hour/labour hour/kg of materials used.  
Prioritise production favouring the product which gives the highest contribution from the (2) scarce resource.  
This will maximise the total contribution and profit earned by the firm. **Max 6**
- (c) The market for some products may depend upon the market for other related products, (2) so restricting the output of a low contribution earner may result in falling sales of a high earner. (2)  
The shortage of a scarce resource may be temporary making it unnecessary to alter the production mix. (2)  
If a shortage is long-term, a maximum amount of a low earner may be produced due to contractual obligations,  
social obligations,  
or the desire to maintain a position in the market. (2 - once) **Max 4**
- (d) If there is a spare production capacity there will normally be the desire to produce components within the business provided that the marginal cost of production is lower than the cost of purchase. (2)  
However, alternative uses of spare capacity may be considered and any contribution earned used to offset relatively high costs of purchase. (2)  
If there is no spare capacity then existing production will have to be foregone to allow the production of components, (2)  
so any contribution lost due to reduced production would be added to the cost of the component before comparison with cost of purchase. (2)  
Where firms have the opportunity to produce a range of components managers will consider cost/contributions on all of them before deciding which to make and which to buy. (2)  
A minimum quantity of some vital components may be produced 'in-house' even if they reduce the overall profitability of the firm, in order to guarantee availability. (2) **Max 8**
- (e) Disadvantages will relate to:  
loss of expertise in production (2)  
unreliability of suppliers (2)  
vulnerability to interruptions in supply (2)  
possible inability to respond to increased demand. (2)  
Lack of storage space **Max 4**

(30 marks)

**Question 10**

- (a) The Budgeted Cost is the cost expected in a given time period for a planned level of output **(2)**, whereas the Standard Cost is the cost expected for the actual level of output achieved. **(2)**

– OR –

For example if production is planned to be 1,000 units per month and each unit is expected to cost £1: Budgeted Cost – £10,000. **(2)** If, however, 1,100 units are produced in the month: Standard Cost – £11,000. **(2)**

**Max 4**

- (b) Variance formulae as given in AH Arrangements Document, Management Accounting, appendix 2.

(i)	Sales Price	(Actual Selling Price – Budgeted Selling Price) x Actual Quantity	1	
(ii)	Sales Volume	Actual Quantity – Budgeted Quantity) x Budgeted Selling Price	1	
(iii)	Material Price	(Standard Price – Actual Price for Unit) x Actual Quantity used	1	
(iv)	Material Usage	(Standard Quantity for production – Actual Quantity used) x Standard Price	1	
(v)	Labour Rate	(Standard Rate – Actual Rate) x Actual Hours worked	1	
(vi)	Labour Efficiency	(Standard Hours for Production – Actual Hours worked) x Standard Rate	1	
(vii)	Fixed Overhead Volume	Budgeted Fixed Overheads – (Standard Hours for production x Fixed Overhead Absorption Rate)	1	
(viii)	Fixed Overhead Expenditure	Budgeted Fixed Overheads – Actual Fixed Overhead Cost	1	<b>(8)</b>

- |     |        |  |   |             |
|-----|--------|--|---|-------------|
| (c) | (i)    | Reduction in price due to quantity discount.   | 1 |             |
|     | (ii)   | Change in quantity sold due to response to advertising or fall in demand due to competition. | 1 |             |
|     | (iii)  | Purchase of materials of a different quality/price to those budgeted due to shortage.        | 2 |             |
|     | (iv)   | Use of poor materials, theft, etc.   | 2 |             |
|     | (v)    | Change in wage rates due to industrial action.   | 2 |             |
|     | (vi)   | Use of a different grade of worker due to absenteeism – poorer/better workmanship.           | 2 |             |
|     | (vii)  | Efficiency of workforce  | 2 |             |
|     | (viii) | Increase in costs from suppliers   | 2 | <b>(12)</b> |

- (d) Variance analysis is only effective if adverse variances can be eliminated by action of staff.

If costs are controllable action can be taken within the firm to reduce excessive spending. **(2)**

It is necessary to determine why performance was below standard, allocate responsibility and take remedial action. **(2)**

No action within the firm can directly reduce non-controllable costs. **(2)**

Adverse variances in respect of non-controllable costs must be remedied by appropriate alterations to the standards. **(2)**

If standards are not altered adverse variances will be inevitable. **(2)**

This could have an adverse effect on staff who are not able to take action. **(2)**

**Max 6**

**(30 marks)**

[END OF MARKING INSTRUCTIONS]