



Mark Scheme

**July 2019**

Pearson LCCI  
Certificate in Cost and Management  
Accounting (VRQ)  
(ASE20098)

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## 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.

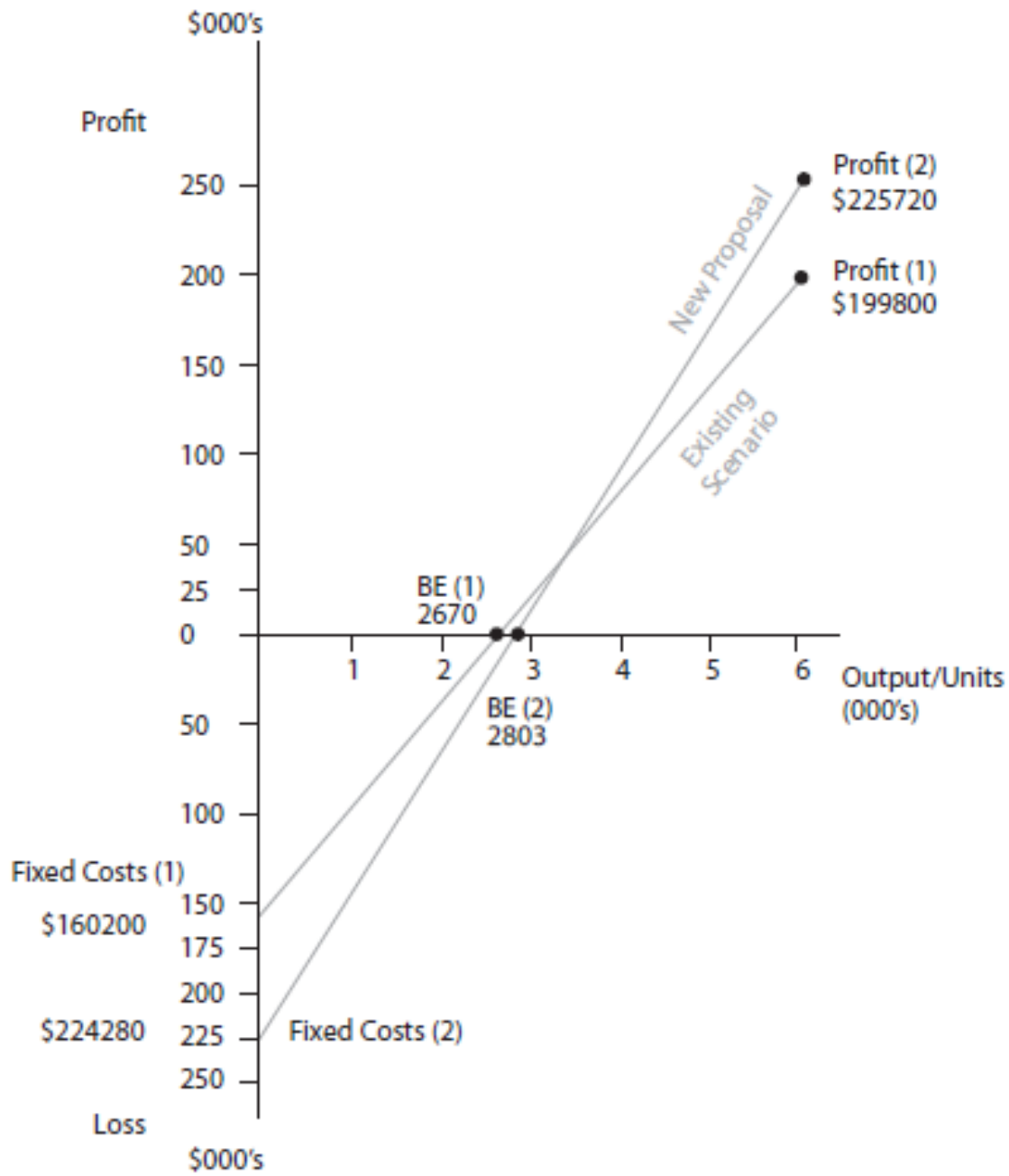
Question Number	Answer AO2 (2)	Mark
<b>1(a)(i)</b>	<b>Break-even point in units:</b>  Selling price \$150.00 less variable costs \$90 (\$20.00 + £50.00 + \$20.00) = <b>\$60 contribution (1)</b>  = Fixed overheads \$160 200 / \$60 = <b>2 670 units (1of)</b>	<b>(2)</b>

Question Number	Answer AO2 (2)	Mark
<b>1(a)(ii)</b>	<b>Margin of safety as a percentage of sales:</b> = 6 000 – 2 670 = <b>3 330 (1of)</b> / 6 000 = <b>55.50% (1of)</b>	<b>(2)</b>

Question Number	Answer AO2 (2)	Mark
<b>1(b)(i)</b>	<b>Break-even point in units:</b>  Selling price \$150.00 less variable costs \$70 (\$20.00 + <b>£30.00</b> + \$20.00) = <b>\$80 contribution (1)</b> Fixed overheads \$224 280 / \$80 = <b>2 804 units (1of)</b>	<b>(2)</b>

Question Number	Answer AO2 (2)	Mark
<b>1(b)(ii)</b>	<b>Margin of safety as a percentage of sales:</b> = 6 000 – 2 804 = <b>3 196 (1of)</b> / 6 000 = <b>53.27% (1of)</b>	<b>(2)</b>

Question Number	Answer AO3 (6)	Mark
<b>1(c)</b>	<b>See separate Profit Volume chart</b>  Award 1 mark for suitable axes Award 1 mark for each correctly labelled break-even point Award 1 mark for each appropriately labelled line – starting with the fixed costs at 0 units and the profit at 6 000 units Award 1 mark for the two correct profit figures	<b>(6)</b>



Question Number	Answer AO4 (4) AO5 (2)	Mark
<b>1(d)</b>	<p><b>Introducing the new machine</b></p> <p><b>Positive factors</b></p> <p>The company would make more profit at 6 000 units <b>(1)</b></p> <p>The increased contribution of \$20 per unit x 6 000 = \$120 000 should offset the increased fixed costs of \$64 080 <b>(1)</b></p> <p>Using additional machinery might improve the quality of the product <b>(1)</b></p> <p><b>2 max</b></p> <p><b>Negative factors</b></p> <p>The company would have a slightly higher break-even <b>(1)</b></p> <p>The margin of safety as a percentage of sales will be lower <b>(1)</b></p> <p>Possible redundancy costs / disaffected labour force <b>(1)</b></p> <p>Availability of funds to purchase the new machinery? <b>(1)</b></p> <p>Can the company guarantee the level of sales <b>(1)</b></p> <p><b>2 max</b></p> <p>Conclusion to determine whether to go ahead or remain as stated with reasoning <b>(2)</b></p>	<b>(6)</b>

**TOTAL FOR QUESTION = 20 MARKS**

Question Number	Answer AO2 (14)	Mark																																																																																																														
2(a)	<table><tr><td></td><td>July</td><td>August</td><td>September</td><td></td></tr><tr><td>Receipts</td><td>\$</td><td>\$</td><td>\$</td><td></td></tr><tr><td>Cash Sales</td><td>32,000</td><td>40,000</td><td>50,400</td><td>(1)</td></tr><tr><td>Credit Sales</td><td><u>128,000</u></td><td><u>128,000</u></td><td><u>160,000</u></td><td>(1)</td></tr><tr><td></td><td><b>160,000</b></td><td><b>168,000</b></td><td><b>210,400</b></td><td></td></tr><tr><td>Interest Rec</td><td>188</td><td>82 OF</td><td><b>20F</b></td><td></td></tr><tr><td>Loan Finance</td><td>125,000</td><td></td><td><b>1</b></td><td></td></tr><tr><td><b>Total Inflows</b></td><td><b>285,188</b></td><td><b>168,082</b></td><td><b>210,400</b></td><td></td></tr><tr><td>Payments</td><td></td><td></td><td></td><td></td></tr><tr><td>Materials</td><td>72,000</td><td>72,000</td><td>91,000</td><td><b>1</b></td></tr><tr><td></td><td>12 800</td><td>16 000</td><td>21 600</td><td><b>1</b></td></tr><tr><td>Variable costs</td><td><u>64,000</u></td><td><u>86,400</u></td><td><u>86,400</u></td><td><b>1</b></td></tr><tr><td></td><td>76,800</td><td>102,400</td><td>108,000 [2]</td><td></td></tr><tr><td>Fixed costs</td><td>25,500</td><td>25,500</td><td>25,500</td><td><b>1</b></td></tr><tr><td>Capital Exp</td><td>125,000</td><td></td><td></td><td><b>1</b></td></tr><tr><td>Loan</td><td></td><td></td><td></td><td><b>1</b></td></tr><tr><td>Repayment</td><td></td><td>12,500</td><td>12,500</td><td></td></tr><tr><td>Interest - overdraft</td><td></td><td></td><td>501</td><td><b>10F</b></td></tr><tr><td><b>Total Outflows</b></td><td><b>299,300</b></td><td><b>212,400</b></td><td><b>237,501</b></td><td></td></tr><tr><td><b>Net Cash flow</b></td><td>(14,112)</td><td>(44,318)</td><td>(27,101)</td><td><b>10F</b></td></tr><tr><td><b>Opening Bal</b></td><td><b>25,000</b></td><td>10 888</td><td>(33,430)</td><td></td></tr><tr><td><b>Closing Bal</b></td><td><b>10,888</b></td><td><b>(33,430)</b></td><td><b>(60,531)</b></td><td><b>1 OF</b></td></tr></table>		July	August	September		Receipts	\$	\$	\$		Cash Sales	32,000	40,000	50,400	(1)	Credit Sales	<u>128,000</u>	<u>128,000</u>	<u>160,000</u>	(1)		<b>160,000</b>	<b>168,000</b>	<b>210,400</b>		Interest Rec	188	82 OF	<b>20F</b>		Loan Finance	125,000		<b>1</b>		<b>Total Inflows</b>	<b>285,188</b>	<b>168,082</b>	<b>210,400</b>		Payments					Materials	72,000	72,000	91,000	<b>1</b>		12 800	16 000	21 600	<b>1</b>	Variable costs	<u>64,000</u>	<u>86,400</u>	<u>86,400</u>	<b>1</b>		76,800	102,400	108,000 [2]		Fixed costs	25,500	25,500	25,500	<b>1</b>	Capital Exp	125,000			<b>1</b>	Loan				<b>1</b>	Repayment		12,500	12,500		Interest - overdraft			501	<b>10F</b>	<b>Total Outflows</b>	<b>299,300</b>	<b>212,400</b>	<b>237,501</b>		<b>Net Cash flow</b>	(14,112)	(44,318)	(27,101)	<b>10F</b>	<b>Opening Bal</b>	<b>25,000</b>	10 888	(33,430)		<b>Closing Bal</b>	<b>10,888</b>	<b>(33,430)</b>	<b>(60,531)</b>	<b>1 OF</b>	
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	<p><b>Example of workings:</b></p> <p>Sales for July = 4 000 units x \$40 = \$160 000 20% = <b>\$32 800</b> payable July. 80% = <b>\$128 000</b> payable in August</p> <p>Wages and other variable production costs June = 4 000 units x \$16 = \$64,000. 20% = <b>\$12,800</b> in July. July = 5 000 units x \$16 = \$ 80,000 80%= <b>\$64,000</b> payable in July</p> <p>Fixed costs \$28,972 per month less \$3,472 depreciation = <b>\$25,500</b> Depreciation \$125,000 / 36 months = \$3,472 Fixed costs and/or budget must not include depreciation</p>																																																																																																															
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Question Number	Answer AO1 (2) AO3 (2)	Mark
<b>2(b)</b>	<p>Award 1 (AO1) mark for basic point and 1 (AO3) mark for development</p> <p>Answers may include:</p> <ul style="list-style-type: none"> <li>• The business will be able to identify potential cash flow problems <b>(1)</b> – and be able to arrange the necessary loans / overdrafts etc <b>(1)</b></li> <li>• The business will be able to identify if an action is affordable <b>(1)</b> – and be able to make changes if they are not <b>(1)</b></li> <li>• If the business runs short of money <b>(1)</b> - it will not be able to afford to pay its day-to-day costs <b>(1)</b></li> <li>• If the business is unable to pay its trade payables <b>(1)</b> then it may not receive any more supplies / may face liquidation <b>(1)</b></li> <li>• <b>The company might be able to identify a surplus (1) which they might be able to invest in the short term (1)</b></li> </ul> <p>TWO required</p>	<b>(4)</b>

**TOTAL FOR QUESTION 2 = 18 MARKS**



Question Number	Answer AO2 (15)	Mark
<b>3(a)</b>	<div style="text-align: right; margin-bottom: 10px;">\$                \$</div> <p>Profit as per cost accounts<span style="float: right;">383 545</span></p> <p><u>Inventory adjustments</u></p> <p>Raw materials – opening [126 050 – 131 700]    (5 650) <b>(1)</b></p> <p>Raw materials - closing [118 450 – 110 680]    (7 770) <b>(1)</b></p> <p>WIP – opening [74 180 – 70 960]<span style="float: right;">3 220 <b>(1)</b></span></p> <p>WIP - closing [87 785 – 81 590]<span style="float: right;">(6 195) <b>1</b></span></p> <p>Finished goods – opening [99 410 – 89 450]      9 960    <b>1</b></p> <p>Finished goods – closing [107 350 – 103 150]    <u>(4 200)</u> <b>1</b>      (<u>10 635</u>)  <span style="float: right;">372 910</span></p> <p><u>Add</u></p> <p>Depreciation (64 600 - 58 350)<span style="float: right;">6 250    <b>1</b></span></p> <p>Discounts received<span style="float: right;">12 320    <b>1</b></span></p> <p>Sundry Investment income<span style="float: right;">19 000    <b>1</b></span></p> <p>Notional rent charge<span style="float: right;"><u>15 300</u>    <b>1</b>          <u>52 870</u></span>  <span style="float: right;">425 780</span></p> <p><u>Less</u></p> <p>Loss on sale of asset<span style="float: right;">(10 700) <b>1</b></span></p> <p>Discounts allowed<span style="float: right;">(16 350) <b>1</b></span></p> <p>Interest charges<span style="float: right;">(9 750) <b>1</b></span></p> <p>Under absorbed overhead<span style="float: right;"><u>(8 980)</u> <b>1</b>          (<u>45 780</u>)</span></p> <p>Profit as per financial accounts<span style="float: right;"><b>380 000    1</b></span></p>	<b>(15)</b>

Question Number	Answer AO1 (2) AO3 (2)	Mark
<b>3(b)</b>	<p>1 mark for initial point and 1 mark for development</p> <p>A non-integrated system has <b>two distinct</b> sets of accounts - cost accounts and financial accounts (1) - which need to be kept in <b>agreement</b> by a reconciliation (or the use of control accounts)/ they could also check the accuracy and spot any potential errors (1).</p> <p>Both sets of accounts may have used <b>different accounting policies</b> (1) such as different valuations for inventory OR different methods to calculate any depreciation charges (1)</p> <p>There are some items that are only entered into <b>one set</b> of accounts (1), such as discounts allowed or discounts received, which are only recorded in the <b>financial accounts</b> OR notional rent, which is only recorded in the <b>cost accounts</b> (1)</p> <p><b>TWO required</b></p>	<b>(4)</b>

**TOTAL FOR QUESTION 3 = 19 MARKS**

Question Number	Answer AO2 (9)	Mark																																																																		
<b>4(a)(i)</b>  \$246 000 = 3 marks  \$241 600 = 2 marks	<p>Variable production cost per unit = \$40 + \$30 + \$18 = <b>\$88 (1)</b></p> <p>*Fixed production overheads per unit = \$48 000 / 2 000 = <b>\$24</b></p> <p>Total production cost per unit = \$88 + \$24 = <b>\$112 (1)</b></p> <p><u>Absorption costing statement</u></p> <table> <tr> <td></td><td>\$000</td><td>\$000</td></tr> <tr> <td>Sales</td><td>2 000 × \$180</td><td>360.0 <b>(1)</b></td></tr> <tr> <td colspan="3"><u>Production costs</u></td></tr> <tr> <td>Opening inventory</td><td><b>500</b> × \$112</td><td>56.0 <b>(1) OF</b></td></tr> <tr> <td colspan="3">Production costs</td></tr> <tr> <td>DM</td><td>2 200 × \$40 =</td><td>\$88 000</td></tr> <tr> <td>DL</td><td>2 200 × \$30 =</td><td>\$66 000</td></tr> <tr> <td>OH</td><td>2 200 × \$18 =</td><td>\$39 600 (1) for all three</td></tr> <tr> <td>FOH</td><td>2 200 × \$24 =</td><td><u>\$52 800 (2)</u></td></tr> <tr> <td>Total Production cost (A)</td><td><b>2 200</b> × \$112</td><td><u>246.4</u> <b>[3]OF</b></td></tr> <tr> <td></td><td></td><td>302.4</td></tr> <tr> <td colspan="3"> <u>Less: Closing inventory</u> <b>700</b> × \$112</td></tr> <tr> <td></td><td></td><td><u>(78.4)</u> <b>(1) OF</b></td></tr> <tr> <td>Total production cost (B)</td><td></td><td>224.0</td></tr> <tr> <td>Less over-absorption</td><td>200 × \$24</td><td><u>(4.8)</u> <b>(1)</b></td></tr> <tr> <td><b>Gross profit</b></td><td></td><td><u>140.8</u></td></tr> <tr> <td colspan="3">LESS Selling and distribution overheads</td></tr> <tr> <td>Variable overhead</td><td>2 000 × \$6</td><td>12.0</td></tr> <tr> <td>Fixed overhead</td><td></td><td><u>30.0</u></td></tr> <tr> <td><b>Profit for period</b></td><td></td><td><u>(42.0)</u> <b>(1)</b></td></tr> <tr> <td></td><td></td><td><b>98.8 (1) OF</b></td></tr> <tr> <td colspan="3"><b>Must have both overheads for the profit mark</b></td></tr> </table>		\$000	\$000	Sales	2 000 × \$180	360.0 <b>(1)</b>	<u>Production costs</u>			Opening inventory	<b>500</b> × \$112	56.0 <b>(1) OF</b>	Production costs			DM	2 200 × \$40 =	\$88 000	DL	2 200 × \$30 =	\$66 000	OH	2 200 × \$18 =	\$39 600 (1) for all three	FOH	2 200 × \$24 =	<u>\$52 800 (2)</u>	Total Production cost (A)	<b>2 200</b> × \$112	<u>246.4</u> <b>[3]OF</b>			302.4	 <u>Less: Closing inventory</u> <b>700</b> × \$112					<u>(78.4)</u> <b>(1) OF</b>	Total production cost (B)		224.0	Less over-absorption	200 × \$24	<u>(4.8)</u> <b>(1)</b>	<b>Gross profit</b>		<u>140.8</u>	LESS Selling and distribution overheads			Variable overhead	2 000 × \$6	12.0	Fixed overhead		<u>30.0</u>	<b>Profit for period</b>		<u>(42.0)</u> <b>(1)</b>			<b>98.8 (1) OF</b>	<b>Must have both overheads for the profit mark</b>			(9)
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Question Number	Answer AO2 (7)	Mark
<b>4(a)(ii)</b>  <		

Question Number	Answer AO2 (2)	Mark
<b>4(b)</b>	Reconciliation between the two profits: Absorption costing 98 800 Marginal costing <u>94 000</u> Difference 4 800 <b>(1of)</b>  Closing inventory 700 Opening inventory (500) = 200 units increase × \$24 = \$4 800 <b>(1of)</b>	<b>(2)</b>

Question Number	Answer AO1 (2)	Mark
<b>4(c)</b>	The difference is caused by some of the fixed production overhead cost being included in the absorption costing inventory increase <b>(1)</b> .  With marginal costing all of the fixed costs are treated as period costs / <b>they only include variable costs. (1)</b>	<b>(2)</b>

**TOTAL FOR QUESTION 4 = 20 MARKS**

Question Number	Answer AO2 (6)	Mark																																																																											
5(a)(i)	<table><tr><td>Year</td><td>Revenue</td><td>Costs</td><td>NCF</td><td></td></tr><tr><td></td><td>\$000</td><td>\$000</td><td>\$000</td><td></td></tr><tr><td>1</td><td>360</td><td>- 30</td><td><b>330</b></td><td></td></tr><tr><td>2</td><td>640</td><td>- 30</td><td><b>610</b></td><td>(1) mark for 2 rows</td></tr><tr><td>3</td><td>820</td><td>- 30</td><td><b>790</b></td><td></td></tr><tr><td>4</td><td>1 150</td><td>- 30</td><td><b>1 120</b></td><td>(1) mark for 2 rows</td></tr><tr><td>5</td><td>830 + 450</td><td>- 30</td><td><b>1 250</b></td><td><b>(1 mark for this row)</b></td></tr></table> <p>Cash flows discounted @ 15%</p> <table><tr><td>Year</td><td>Cash flow</td><td>Factor</td><td>Present values</td><td></td></tr><tr><td>0</td><td>(2 300)</td><td></td><td>1.000 (2 300)</td><td><b>(1)</b></td></tr><tr><td>1</td><td>330</td><td>0.870</td><td>287.10</td><td>OF</td></tr><tr><td>2</td><td>610</td><td>0.756</td><td>461.16</td><td>OF</td></tr><tr><td>3</td><td>790</td><td>0.658</td><td>519.82</td><td>OF</td></tr><tr><td>4</td><td>1 120</td><td>0.572</td><td>640.64</td><td>OF</td></tr><tr><td>5</td><td>1 250</td><td>0.497</td><td><u>621.25</u></td><td>OF <b>(1) all 5 rows</b></td></tr><tr><td></td><td></td><td><b>NPV =</b></td><td><b><u>229.97</u></b></td><td><b>OF (1)</b></td></tr></table>	Year	Revenue	Costs	NCF			\$000	\$000	\$000		1	360	- 30	<b>330</b>		2	640	- 30	<b>610</b>	(1) mark for 2 rows	3	820	- 30	<b>790</b>		4	1 150	- 30	<b>1 120</b>	(1) mark for 2 rows	5	830 + 450	- 30	<b>1 250</b>	<b>(1 mark for this row)</b>	Year	Cash flow	Factor	Present values		0	(2 300)		1.000 (2 300)	<b>(1)</b>	1	330	0.870	287.10	OF	2	610	0.756	461.16	OF	3	790	0.658	519.82	OF	4	1 120	0.572	640.64	OF	5	1 250	0.497	<u>621.25</u>	OF <b>(1) all 5 rows</b>			<b>NPV =</b>	<b><u>229.97</u></b>	<b>OF (1)</b>	(6)
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Question Number	Answer AO2 (4)	Mark																																
5(a)(ii)	<p>Cash flows discounted @ 20%</p> <table><thead><tr><th></th><th>\$000</th><th></th><th>\$000</th></tr><tr><th>Year</th><th>Cash flow</th><th>Factor</th><th>Present values</th></tr></thead><tbody><tr><td>0</td><td>(2 300)</td><td>1.000</td><td>(2 300)</td></tr><tr><td>1</td><td>330</td><td>0.833</td><td>274.89</td></tr><tr><td>2</td><td>610</td><td>0.694</td><td>423.34</td></tr><tr><td>3</td><td>790</td><td>0.579</td><td>457.41</td></tr><tr><td>4</td><td>1 120</td><td>0.482</td><td>539.84</td></tr><tr><td>5</td><td>1 250</td><td>0.402</td><td><u>502.50</u></td></tr></tbody></table> <p>NPV = (102.02)</p> <p>IRR = 15% + {5% × [229.97 ÷ (229.97 + 102.02)]} = 18.46%</p>		\$000		\$000	Year	Cash flow	Factor	Present values	0	(2 300)	1.000	(2 300)	1	330	0.833	274.89	2	610	0.694	423.34	3	790	0.579	457.41	4	1 120	0.482	539.84	5	1 250	0.402	<u>502.50</u>	<p>(4)</p> <p>(1)</p> <p>(1of)</p>
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Question Number	Answer AO2 (3)	Mark																				
5(a)(iii)	<p><b>Calculation of the discounted payback</b></p> <table><tr><td></td><td></td><td>(2 300.00)</td><td></td></tr><tr><td>1</td><td>287.10</td><td>(2 012.90)</td><td></td></tr><tr><td>2</td><td>461.16</td><td>(1 551.74)</td><td></td></tr><tr><td>3</td><td>519.82</td><td>(1 031.92)</td><td></td></tr><tr><td>4</td><td>640.64</td><td>(391.28)</td><td><b>(1)</b></td></tr></table> <p>391.28 / 621.25 x 12 = 7.56 months <b>(1)</b></p> <p><b>= 4 years (1) and 7.56 months (1)</b></p> <p><b>Alternative answer:</b></p> <p>Year 5 (830 – 30) = 800 x 0.497 = 397.6</p> <p>391.28/397.6 x 12 = 4 years and 11.9 months</p>			(2 300.00)		1	287.10	(2 012.90)		2	461.16	(1 551.74)		3	519.82	(1 031.92)		4	640.64	(391.28)	<b>(1)</b>	<b>(3)</b>
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4	640.64	(391.28)	<b>(1)</b>																			

Question Number	Answer AO4 (3) AO5 (1)	Mark
<b>5(b)</b>	<p>The capital investment project is financially worthwhile <b>(1)</b> because: it <b>generates a positive NPV (1)</b>, the IRR at 18.46% is <b>greater than the cost of capital of 15% (1)</b> and the discounted payback gives a return within the life of 5 years <b>(1)</b>.</p>	<b>(4)</b>

Question Number	Answer AO1 (2) AO4 (2) AO5 (2)	Mark
<b>5(c)</b>	<p>The NPV method recognises that money has a time value. It takes the present value of cash inflows minus the present value of cash outflows <b>(1)</b>, to arrive at a net present value of a capital project and selects projects that have positive net present value. <b>(1)</b></p> <p>The IRR is the <b>cost of capital rate</b> at which the present value of the cash flow matches the initial investment and selects projects that have a rate of return which is higher than the cost of capital. <b>(1)</b> The IRR uses two discount rates and therefore two net present values used in a formula to arrive at a rate of return which is compared to the cost of capital <b>(1)</b>.</p> <p>The IRR does not assess the financial impact on a firm; it only requires meeting a minimum return rate <b>(1)</b></p> <p>[Four maximum]</p> <p>The NPV and IRR methods can rank two projects differently, depending on the size of the investment <b>(1)</b> The IRR method is not reliable when dealing with two mutually exclusive investments <b>(1)</b></p>	<b>(6)</b>

**TOTAL FOR QUESTION 5 = 23 MARKS**  
**TOTAL FOR PAPER = 100 MARKS**