



# Cambridge International AS & A Level

---

**ACCOUNTING**

**9706/04**

Paper 4 Cost and Management Accounting

**For examination from 2023**

MARK SCHEME

Maximum Mark: 50

---

**Specimen**

---

This document has **12** pages.

**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptors for a question. Each question paper and mark scheme will also comply with these marking principles.

**GENERIC MARKING PRINCIPLE 1:**

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

**GENERIC MARKING PRINCIPLE 2:**

Marks awarded are always **whole marks** (not half marks, or other fractions).

**GENERIC MARKING PRINCIPLE 3:**

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

**GENERIC MARKING PRINCIPLE 4:**

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

**GENERIC MARKING PRINCIPLE 5:**

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

**GENERIC MARKING PRINCIPLE 6:**

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

**Social Sciences and Humanities Subject Specific Marking Principles  
(for point-based marking)****1 Components using point-based marking:**

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

- DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
  - DO credit alternative answers/examples which are not written in the mark scheme if they are correct
  - DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons ...).
  - DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
  - DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities, e.g. a scattergun approach to a question asking for *n* items
  - DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
  - DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)
- 2 Presentation of mark scheme:**
- Slashes (/) or the word 'or' separate alternative ways of making the same point.
  - Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
  - Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

**3 Calculation questions:**

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

**4 Annotation:**

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

**Abbreviations and guidance**

The following abbreviations may be used in the mark scheme:

**OF** = own figure. The answer will be marked correct if a candidate has correctly used their own figure from a previous part or calculation

**W** = working. The working for a figure is given below. Where the figure has more than one mark associated with it, the working will show where individual marks are to be awarded.

**CF** = correct figure. The figure has to be correct i.e. no extraneous items have been included in the calculation

Extraneous item = an item that should not have been included in a calculation, including indirect expenses such as salaries in calculation of gross profit when there is one **OF** mark for gross profit

Curly brackets, }, are used to show where one mark is given for more than one figure. If the figures are not adjacent, each is marked with a curly bracket and a symbol e.g. }\*

**row** = all figures in the row must be correct for this mark to be awarded

Marks for figures are dependent on correct sign/direction

Accept other valid responses. This statement indicates that marks may be awarded for answers that are not listed in the mark scheme but are equally valid.

Question	Answer	Marks															
1(a)	<p><b>State three advantages of using a budgetary control system.</b></p> <p><b>1 mark each for any three advantages (max 3):</b></p> <p>Coordinating among departments for allocation of resources (1)            Setting target for each department to achieve (1)            Motivating managers/employees towards objectives (1)            Serving as a benchmark to control the use of resources (1)            Facilitating variance analysis (1)            Help making decision, for example, pricing (1)</p> <p>Accept other valid responses</p>	3															
1(b)	<p><b>Prepare a statement to show the total flexible budgeted profit.</b></p> <table style="margin-left: 40px;"> <tr> <td>Sales</td> <td>1120 × \$135</td> <td>\$ 151 200</td> </tr> <tr> <td>Direct materials</td> <td></td> <td>(26 880) (1)</td> </tr> <tr> <td>Direct labour</td> <td></td> <td>(67 200) (1)</td> </tr> <tr> <td>Fixed overheads</td> <td><b>W1</b></td> <td>(28 000) (1)</td> </tr> <tr> <td>Flexible budgeted profit</td> <td></td> <td>29 120 (1)<b>OF</b></td> </tr> </table> <p><b>W1</b>  <math>\\$30\,000 / (1200 \times 4) = \\$6.25</math> per labour hour  <math>\\$6.25 \times (1120 \times 4) = \\$28\,000</math></p>	Sales	1120 × \$135	\$ 151 200	Direct materials		(26 880) (1)	Direct labour		(67 200) (1)	Fixed overheads	<b>W1</b>	(28 000) (1)	Flexible budgeted profit		29 120 (1) <b>OF</b>	4
Sales	1120 × \$135	\$ 151 200															
Direct materials		(26 880) (1)															
Direct labour		(67 200) (1)															
Fixed overheads	<b>W1</b>	(28 000) (1)															
Flexible budgeted profit		29 120 (1) <b>OF</b>															
1(c)(i)	<p><b>Calculate the direct labour rate variance.</b></p> <p><math>(4424 \times \\$15) - \\$67\,466 = \\$1106</math> (1) A (1)</p>	2															
1(c)(ii)	<p><b>Calculate the direct labour efficiency variance.</b></p> <p><math>(1120 \times 4 - 4424) \times \\$15 = \\$840</math> (1) F (1)</p>	2															
1(c)(iii)	<p><b>Calculate the fixed overheads expenditure variance.</b></p> <p><math>\\$30\,000 - \\$29\,500 = \\$500</math> (1) F (1)</p>	2															

Question	Answer	Marks																								
1(c)(iv)	<p><b>Calculate the fixed overheads volume variance.</b></p> $(4800 - 1120 \times 4) \times \$6.25 = \$2000 \text{ (1) A (1)}$	<b>2</b>																								
1(d)	<p><b>Prepare a statement to reconcile the flexible budgeted profit from (b) with the actual profit.</b></p> <p>Each mark is for an amount that is clearly identified</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Flexible budgeted profit</td> <td style="width: 10%; text-align: right;">\$</td> <td style="width: 30%;"></td> </tr> <tr> <td>Total direct materials variance</td> <td style="text-align: right;">29 120</td> <td></td> </tr> <tr> <td></td> <td style="text-align: right;">(420) (1)</td> <td></td> </tr> <tr> <td>Direct labour rate variance</td> <td style="text-align: right;">1106A</td> <td></td> </tr> <tr> <td>Direct labour efficiency variance</td> <td style="text-align: right;"><u>840E</u></td> <td style="text-align: right;">(266) } (see Note 1)</td> </tr> <tr> <td>Overheads expenditure variance</td> <td style="text-align: right;">500F</td> <td></td> </tr> <tr> <td>Overheads volume variance</td> <td style="text-align: right;"><u>2000A</u></td> <td style="text-align: right;">(1 500) } (1)OF (see Note 1)</td> </tr> <tr> <td>Actual profit (\$151 200 – \$124 266)</td> <td style="text-align: right;"><u>26 934</u></td> <td style="text-align: right;"><u>(1)</u></td> </tr> </table> <p>Note 1: Individual variances will be acceptable</p>	Flexible budgeted profit	\$		Total direct materials variance	29 120			(420) (1)		Direct labour rate variance	1106A		Direct labour efficiency variance	<u>840E</u>	(266) } (see Note 1)	Overheads expenditure variance	500F		Overheads volume variance	<u>2000A</u>	(1 500) } (1)OF (see Note 1)	Actual profit (\$151 200 – \$124 266)	<u>26 934</u>	<u>(1)</u>	<b>3</b>
Flexible budgeted profit	\$																									
Total direct materials variance	29 120																									
	(420) (1)																									
Direct labour rate variance	1106A																									
Direct labour efficiency variance	<u>840E</u>	(266) } (see Note 1)																								
Overheads expenditure variance	500F																									
Overheads volume variance	<u>2000A</u>	(1 500) } (1)OF (see Note 1)																								
Actual profit (\$151 200 – \$124 266)	<u>26 934</u>	<u>(1)</u>																								

Question	Answer	Marks																					
1(e)	<p>Advise the directors which option they should choose.</p> <p><b>Justify your answer by:</b></p> <ul style="list-style-type: none"> <li>• showing appropriate calculations (ignoring fixed overheads)</li> <li>• making reference to non-financial factors.</li> </ul> <table style="margin-left: 40px;"> <thead> <tr> <th></th> <th style="text-align: center;">Option 1</th> <th style="text-align: center;">Option 2</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">\$</td> <td style="text-align: center;">\$</td> </tr> <tr> <td>Sales</td> <td style="text-align: right;">184 300 }</td> <td style="text-align: right;">131 500 } (1)</td> </tr> <tr> <td>Direct materials</td> <td style="text-align: right;">33 600</td> <td style="text-align: right;">24 000</td> </tr> <tr> <td>Direct labours</td> <td style="text-align: right;">84 000</td> <td style="text-align: right;">60 000</td> </tr> <tr> <td>OT premium</td> <td style="text-align: right;"><u>9 000</u> (1)</td> <td></td> </tr> <tr> <td>Contribution</td> <td style="text-align: right;"><u>57 700</u> (1)</td> <td style="text-align: right;"><u>47 500</u> (1)</td> </tr> </tbody> </table> <p>Non-financial factors (1 mark each for any two):</p> <p>For Option 1</p> <ul style="list-style-type: none"> <li>• capacity can be fully used (1)</li> <li>• workers are happy to work overtime because they can earn more (1)</li> </ul> <p>For Option 2</p> <ul style="list-style-type: none"> <li>• no overtime (as the number of units produced will be less than 1200) which will improve efficiency (1)</li> <li>• spare capacity can be kept in reserve for other urgent orders (1)</li> </ul> <p>Accept other valid responses</p> <p><b>1 mark</b> for decision e.g. the directors should choose Option 1 and accept the orders of A, B and C (1)</p>		Option 1	Option 2		\$	\$	Sales	184 300 }	131 500 } (1)	Direct materials	33 600	24 000	Direct labours	84 000	60 000	OT premium	<u>9 000</u> (1)		Contribution	<u>57 700</u> (1)	<u>47 500</u> (1)	7
	Option 1	Option 2																					
	\$	\$																					
Sales	184 300 }	131 500 } (1)																					
Direct materials	33 600	24 000																					
Direct labours	84 000	60 000																					
OT premium	<u>9 000</u> (1)																						
Contribution	<u>57 700</u> (1)	<u>47 500</u> (1)																					



Question	Answer	Marks																												
2(a)(i)	<p><b>Calculate the payback period in years and days.</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Year</th> <th style="text-align: right;">Cash inflow \$</th> <th style="text-align: right;">Cash outflow \$</th> <th style="text-align: right;">Net cash flow \$</th> </tr> </thead> <tbody> <tr> <td>1</td> <td style="text-align: right;">200 000</td> <td style="text-align: right;">140 000</td> <td style="text-align: right;">60 000 }</td> </tr> <tr> <td>2</td> <td style="text-align: right;">230 000</td> <td style="text-align: right;">130 000</td> <td style="text-align: right;">100 000 }</td> </tr> <tr> <td>3</td> <td style="text-align: right;">240 000</td> <td style="text-align: right;">110 000</td> <td style="text-align: right;">130 000 }</td> </tr> <tr> <td>4</td> <td style="text-align: right;">210 000</td> <td style="text-align: right;">100 000</td> <td style="text-align: right;"><u>110 000</u> } (1)</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: right;"><u>400 000</u></td> </tr> </tbody> </table> <p><math>\\$300\,000 - (\\$60\,000 + \\$100\,000 + \\$130\,000) = \\$10\,000</math>  <math>(\\$10\,000/\\$110\,000) \times 365 = 34</math> days</p> <p>3 years 34 days (1)</p>	Year	Cash inflow \$	Cash outflow \$	Net cash flow \$	1	200 000	140 000	60 000 }	2	230 000	130 000	100 000 }	3	240 000	110 000	130 000 }	4	210 000	100 000	<u>110 000</u> } (1)				<u>400 000</u>	2				
Year	Cash inflow \$	Cash outflow \$	Net cash flow \$																											
1	200 000	140 000	60 000 }																											
2	230 000	130 000	100 000 }																											
3	240 000	110 000	130 000 }																											
4	210 000	100 000	<u>110 000</u> } (1)																											
			<u>400 000</u>																											
2(a)(ii)	<p><b>Calculate the accounting rate of return to <u>two</u> decimal places.</b></p> <p>Average profit <math>(\\$400\,000 - \\$300\,000)/4 = \\$25\,000</math>  Average investment <math>\\$300\,000/2 = \\$150\,000</math>  <b><math>\\$25\,000 (1)/\\$150\,000 (1) = 16.67\% (1)OF</math></b></p>	3																												
2(a)(iii)	<p><b>Calculate the net present value.</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Year</th> <th style="text-align: right;">Net cash flow \$</th> <th style="text-align: right;">10%</th> <th style="text-align: right;">NPV \$</th> </tr> </thead> <tbody> <tr> <td>0</td> <td style="text-align: right;">(300 000)</td> <td style="text-align: right;">1</td> <td style="text-align: right;">(300 000) (1)</td> </tr> <tr> <td>1</td> <td style="text-align: right;">60 000</td> <td style="text-align: right;">0.909</td> <td style="text-align: right;">54 540 }</td> </tr> <tr> <td>2</td> <td style="text-align: right;">100 000</td> <td style="text-align: right;">0.826</td> <td style="text-align: right;">82 600 }</td> </tr> <tr> <td>3</td> <td style="text-align: right;">130 000</td> <td style="text-align: right;">0.751</td> <td style="text-align: right;">97 630 }</td> </tr> <tr> <td>4</td> <td style="text-align: right;">110 000</td> <td style="text-align: right;">0.683</td> <td style="text-align: right;"><u>75 130</u> } (1)</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: right;"><u>9 900</u> (1)OF</td> </tr> </tbody> </table>	Year	Net cash flow \$	10%	NPV \$	0	(300 000)	1	(300 000) (1)	1	60 000	0.909	54 540 }	2	100 000	0.826	82 600 }	3	130 000	0.751	97 630 }	4	110 000	0.683	<u>75 130</u> } (1)				<u>9 900</u> (1)OF	3
Year	Net cash flow \$	10%	NPV \$																											
0	(300 000)	1	(300 000) (1)																											
1	60 000	0.909	54 540 }																											
2	100 000	0.826	82 600 }																											
3	130 000	0.751	97 630 }																											
4	110 000	0.683	<u>75 130</u> } (1)																											
			<u>9 900</u> (1)OF																											

Question	Answer	Marks																												
2(a)(iv)	<p>Calculate the internal rate of return to <u>two</u> decimal places.</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;">Year</th> <th style="text-align: right;">Net cashflow \$</th> <th style="text-align: right;">12%</th> <th style="text-align: right;">NPV \$</th> </tr> </thead> <tbody> <tr> <td>0</td> <td style="text-align: right;">(300 000)</td> <td style="text-align: right;">1</td> <td style="text-align: right;">(300 000)</td> </tr> <tr> <td>1</td> <td style="text-align: right;">60 000</td> <td style="text-align: right;">0.893</td> <td style="text-align: right;">53 580</td> </tr> <tr> <td>2</td> <td style="text-align: right;">100 000</td> <td style="text-align: right;">0.797</td> <td style="text-align: right;">79 700</td> </tr> <tr> <td>3</td> <td style="text-align: right;">130 000</td> <td style="text-align: right;">0.712</td> <td style="text-align: right;">92 560</td> </tr> <tr> <td>4</td> <td style="text-align: right;">110 000</td> <td style="text-align: right;">0.636</td> <td style="text-align: right;"><u>69 960</u></td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: right;"><u>(4 200) (1)</u></td> </tr> </tbody> </table> <p>(10% + [\$9900/(\$9900 + \$4200)] × (12% – 10%)) (1) = 11.40% <b>(1)OF</b>  OR  (12% – [\$4200/(\$9900 + \$4200)] × (12% – 10%)) (1) = 11.40% <b>(1)OF</b></p>	Year	Net cashflow \$	12%	NPV \$	0	(300 000)	1	(300 000)	1	60 000	0.893	53 580	2	100 000	0.797	79 700	3	130 000	0.712	92 560	4	110 000	0.636	<u>69 960</u>				<u>(4 200) (1)</u>	<b>3</b>
Year	Net cashflow \$	12%	NPV \$																											
0	(300 000)	1	(300 000)																											
1	60 000	0.893	53 580																											
2	100 000	0.797	79 700																											
3	130 000	0.712	92 560																											
4	110 000	0.636	<u>69 960</u>																											
			<u>(4 200) (1)</u>																											

Question	Answer	Marks
2(b)	<p><b>Advise the directors whether Z Limited should purchase the machine to manufacture the new product.</b></p> <p><b>Justify your answer with reference to financial and non-financial factors.</b></p> <p><b>3 marks</b> for financial factors (1 mark for each factor up to a maximum of three)  <b>3 marks</b> for non-financial factors (1 mark for each factor up to a maximum of three)  <b>1 mark</b> for decision</p> <p><b>Financial factors (max 3):</b>  The investment has a positive net present value, i.e. \$9900 <b>(1)</b>  Payback period (3 years 34 days) is before end of the investment (4 years) <b>(1)</b>  IRR (11.40%) is higher than the cost of capital (10%) <b>(1)</b>  ARR (16.67%) is higher than the cost of capital (10%) <b>(1)</b></p> <p><b>Non-financial factors (max 3):</b>  Staff training <b>(1)</b>  Reliability of raw materials supply from new supplier <b>(1)</b>  Availability of qualified specialised engineer <b>(1)</b>  An opportunity to develop new product/capability of the business/new market <b>(1)</b></p> <p><b>Decision</b>  Z Limited should purchase the machine to manufacture the new product <b>with reason given</b> e.g. as the higher NPV, IRR and ARR outweigh the non-financial factors <b>(1)</b></p> <p>Accept other valid responses</p> <p>Own figure rule applies</p>	7

Question	Answer	Marks
2(c)	<p><b>Explain the impact of this increase in the import duty on the decision in (b).</b></p> <p><b>Support your answer with calculations.</b></p> <p>The new cost of the machine will be:  <math>(\\$300\,000/120\%) \times 130\% = \\$325\,000</math> (1), increase in cost of \$25 000 (1)</p> <p>Payback period will now be  <math>\\$325\,000 - (\\$60\,000 + \\$100\,000 + 130\,000) = \\$35\,000</math>  <math>(\\$35\,000/\\$110\,000) \times 365 = 117</math> days  3 years 117 days (1) <b>OR</b> – 3 years 34 days = 83 more days to payback (1)</p> <p>Accounting rate of return (ARR) will now be  <math>\\$75\,000/4 = \\$18\,750</math>  <math>ARR = (\\$18\,750/\\$162\,500) \times 100 = 11.54\%</math> (1) <b>OR</b> ARR has declined (1)</p> <p>Net present value (NPV) will be  <math>\\$9900 - \\$25\,000 = (\\$15\,100)</math> (1) <b>OR</b> change from positive NPV to negative NPV (1)</p> <p>The increase in import duty will affect the decision, meaning that Z Limited should not purchase the machine to manufacture the new product (1) mainly due to a negative NPV (1)</p> <p>Accept other valid responses</p>	7