

Mark Scheme **Results** April 2016

Pearson LCCI Cost and Management Accounting Level 3 (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.
- Where marks are awarded for own figure answers, these marks can only be awarded if evidence of how the candidates arrived at their values has been provided (their workings).
- If candidates' fail to provide their workings when instructed in the paper, it may not be possible to achieve all marks associated with the question, even if the final answer is correct.
- For calculation questions, full marks can be awarded where correct answer is seen with no workings shown, unless question states that candidates must provide workings.

Abbreviations

M1	Method Mark
	This is used to reward candidates where there is evidence of the candidate having adopted the correct method for a calculation, but where the accuracy of the answer is not necessarily being awarded a mark.
A1	Accuracy Mark
	This is used to reward candidates who have attained the answer to a specific calculation representing a method in the question. If stated in the mark scheme, the own figure rule can be used with the accuracy mark.
of	Own Figure rule
	Accuracy marks can be awarded where the candidates' answer does not match the mark scheme, though is accurate based on their valid method.
сао	Correct Answer Only rule
	Accuracy marks will only be awarded if the candidates' answer is correct, and in line with the mark scheme.
oe	Or Equivalent rule
	This rule is used when the value of an answer may be presented in a variety of ways, such as fractions (simplified/non-simplified/mixed), decimals, percentages. The candidates' answer must be equivalent in value to the mark scheme answer.
awrt	'Anything Which Rounds To' rule
	This rule is used when the candidates supply a figure which rounds to the value determined by the mark scheme.

Question Number	Answer (AO1) 4	Mark
1 (a)	Award 1 mark for each benefit.	
	Answers may include:	
	 Maintains planned levels of inventory (1) 	
	 Keeps total inventory investment to a minimum (1) 	
	 May keep inventory holding costs to a minimum (1) 	
	 Reduces the risk of running out of inventory (1) 	
	May keep inventory ordering costs to a minimum (1)	(4)

Question Number	Answer (AO2) 5								Mark
1(b)(i)	Award 1 mark for ea	ach co	rrect co	olumn o	of figures				
	C	Order	No of	Order	Average	Holding	Total		
		size	orders	costs	inventory	costs	costs		
		(kg)		(\$)	(kg)	(\$)	(\$)		
	1	1 000	12	2 400	1 500	1 800	4 200		
	2	2 000	6	1 200	2 000	2 400	3 600		
	3	3 000	4	800	2 500	3 000	3 800		
	4	4 000	3	600	3 000	3 600	4 200		
			(1)	(1)	(1)	(1of)	(1of)		(5)

Question Number	Answer (A05) 1	Mark
1(b)(ii)	Award 1of mark for answer. 2 000 kg has the lowest total cost (1of)	(1)

Question Number	Answer (A02) 1	Mark
1(c)(i)	Award 1 mark for correct answer. Reorder level = 360 x 21 = 7 560 kg (1)	(1)

Question Number	Answer (AO2) 2	Mark
1(c)(ii)	Award 1 method mark and 1of for answer. Minimum control level = 7 560 (of) - $(300 \times 18) (1)$ = 2 160 kg (1of)	(2)

Question Number	Answer (AO2) 3	Mark
1(c)(iii)	Award 2 method marks and 1of for answer. Maximum control level = 7 560 (of) - (240 x 15) (1) + 10 000 (1) = 13 960 kg (1of)	(3)

TOTAL FOR QUESTION 1 – 16 MARKS

Question Number	Answer (AO2) 4		Mark
2(a)(i)	Award 1 mark each correct answer for t Planned total contribu	for total and unit contribution. Award 1 method mark and 1 he break-even point. tion = \$440 000 + \$520 000	
	Unit contribution	$= \$960\ 000\ (1)$ = \\$960\ 000/120\ 000 = \\$8 per unit (1) = \\$440\ 000/\\$8\ (1)	
		$= 55\ 000\ units\ (1)$	(4)

Question	Answer (AO2) 1	
Number		
2(a)(ii)	Award 1of mark provided the break-even value calculated in a(i) is used.	
	Margin of safety = $[(120\ 000\ -\ 55\ 000\ (of))/120\ 000]$	
	= 54.2%(10f)	(1)

Question	Answer (AO2) 1	
Number		
2(a)(iii)	Award 1of mark provided the unit contribution figure calculated in a(i) is used.	
	Contribution ratio = \$8(of)/\$15	
	= 53.3% (1of)	(1)

Question Number	Answer (AO2) 3	Mark
2 (b)	Award 2 method marks and 1of mark for profit calculation.	
	Changed production process	
	Unit contribution = $$15 - $5 = 10 per unit (1)	
	Contribution at 120,000 units output = $120\ 000\ x\ \$10$ (of)	
	= \$1 200 000 (1of)	
	Profit at 120,000 units output	
	=\$1 200 000 (of) - \$700 000	
	=\$500 000 (1of)	(3)

Question Number	Answer (AO2) 4 (AO4)1	Mark
2 (c)	Award 4 marks for calculations and 1of mark for advice. Supporting calculations for management advice: • Sales level is where total costs are equal for both methods. • Original VC costs calculated from 2(a) \$15-\$8=\$7 (of) • Existing method total costs =(\$7 (of) x output) + \$440 000(1of) • Changed method total costs =(\$5 x output)+\$700 000 (1) Therefore • (\$7 x output)+\$440 000=(\$5 x output)+\$700 000(1) • Level of output = (\$700 000 - \$440 000) / (7-5) (1) = 130 000 units Advice The changed process should be introduced at sales levels in excess of 130 000(1of) units.	(5)

Question Number	Answer (A03) 2	Mark
2(d)(i)	Award 1 mark for each point up to a maximum of 2 marks. Opportunity costs relate to the benefit that could have been earned but have been given up (1) by choosing one option instead of another/an alternative option. (1)	(2)

Question Number	Answer (A03) 2	Mark
2(d)(ii)	Award 1 mark for each point up to a maximum of 2 marks. A relevant cost is a future cash outflow/expenditure (1) arising as a direct consequence of a decision being made. (1)	(2)

TOTAL FOR QUESTION 2 – 18 MARKS

Question Number	Answer (AO2) 1	1					Mark		
3(a)	Award 11 marks for calculations. 7 marks, 1 for each row. 3 marks for production department totals. *1 mark for fully depleting service departments.								
	Production Departments Service Departments								
		А	В	C	Р	Q			
		\$	\$	\$	\$	\$			
	Overheads	8 802	7 511	10 207	7 200	9 280			
	Department P	2 880	1 440	2 160	(7 200)	720_(1)			
						10 000 (1)			
	Department Q	5 000	2 000	1 000	2 000	$(10\ 000)\ (1)$			
	Department P	800	400	600	(2 000)	200 (1)			
	Department Q	100	40	20	40	(200) (1)			
	Department P	16	8	12	(40)	4 (1)			
	Department Q	2	1	1	0	(4) (1)			
		17 600	(1of) 11 400	(1of) 14 000	(1of) 0	0 (1*))		
						、 ,	(11)		

Question Number	Answer (AO2) 1	Mark
3 (b)	Award 1of mark provided total overhead figure calculated for Department A is used.	
	Department A	
	Pre-determined overhead absorption rate	
	\$17 600 (of)/8 000 = \$2.20 per labour hour (1of)	(1)

Question Number	Answer (A05) 4	Mark
3 (c)	Award 2 marks for each department from below. (2x2)	
	Department B Method - machine hours (1) Reason-high machine hours coupled with low labour hours suggests Department B is dominated by machines. (1)	
	Department C Method – number of units produced (1) Reason – a mixture of machine and labour hours (suggests a finishing department) where neither machine or labour hours dominate. The business only produces a single product hence units produced is most appropriate.(1)	(4)

Question Number	Answer (AO2) 2	Mark
3 (d)	Award 1of mark for each department provided total overhead figures calculated in (a) are used.	
	Department B Pre-determined overhead absorption rate \$11 400 (of)/6 000 = \$1.90 per machine hour (1of)	
	Department C Pre-determined overhead absorption rate \$14 000 (of)/2 000 = \$7.00 per unit (1of)	(2)

Question Number	Answer (AO3) 1 (AO1) 1	Mark
3(e)(i)	 Award 1 mark for explanation and 1 mark for providing one example. Allocation is the charging of the whole overhead item to one cost centre.(1) Examples include: specific rent and insurance (1) indirect labour (1) indirect material.(1) 	(2)

Question Number	Answer (AO3) 1 (AO1) 1	Mark
3 (e)(ii)	Award 1 mark for explanation and 1 mark for providing one example. Apportionment is the sharing of overheads between two or more cost centres. (1) Examples include: • non-specific rent (1) • rates (1) • insurance (1) • electricity (1) • depreciation.(1)	(2)

TOTAL FOR QUESTION 3 – 22 MARKS

Question Number	Answer (AO2) 3							Mark
4(a)(i)	Award 1 mark for each correct row of figures. Award 1of mark for February, March, and April totals.							
	Production budget (uni	its)						
		Jan	Feb	March	April	May	June	
	Sales	240	260	240	260	250	220	
	40% current sales	96	104	96	104 (1) 100		
	60% following month	156	144	156	150 (1) 132		
	Production budget	252	248	252	254 (1	of) 232		
	_					-		(3)

Question Number	Answer (AO2) 2						Mark
4(a)(ii)	Award 1of mark for each row of figures based on (a)(i). Award mark for OF February, March, and April figures.						
		Jan	Feb	March	April		
	Material budget (units)	248	252	254	232	(1of)	
	Material budget (\$)	3 968	4 032	4 064	3 712	(1of)	(2)

Question Number	Answer	(AO2) 3				Mark
4(a)(iii)	Award April fi Labour	1of mar gures. cost budg	k for eacl get	n correct	row of figures. Award mark for OF February, March, and	
	Basic Bonus	\$ Jan 3 024 <u>208</u> 3 232	\$ Feb 2 976 <u>192</u> 3 168	\$ March 3 024 208 3 232	\$ April 3 048 (1of) <u>216</u> (1of) 3 264 (1of)	(3)

Question Number	Answer (AO2) 11					Mark
4(a)(iv)	Award 11 marks for calculating	values. A	ward of m	arks as sl	nown in workings.	
	Cash budget					
		Feb	March	April		
		\$	\$	\$		
	Receipts					
	Sales	9 632	9 768	9 632	(2+1of)	
	Payments					
	Material	3 968	4 032	4 064	(1of)	
	Wages	3 184	3 216	3 256	(1+1of)	
	Fixed production overheads	1 000	1 000	1 000	(1)	
	Selling expenses	960	1 040	960	(1)	
	Fixed administrative overheads	600	600	600		
		9 712	9 888	9 880	(1of)	
	Net cash flow	(80)	(120)	(248)	(1of)	
	Opening bank	(2 000)	(2 080)	(2 200)		
	Closing bank	(2 080)	(2 200)	(2 448)	(1of)	
					-	
						(11)

 Workin	igs:						 	
Sales re	eceipts							
	Sales	Cash	Credit (60%	5 x 0.95)	Receipts			
Jan	9 600							
Feb	10 400	4 160	5 47	2	\$9 632			
March	9 600	3 840	5 92	8	\$9 768			
April	10 400	4 160	5 47	2	\$9 632			
		[1]	[1]		[1of]			
Material	l navment	ts (of fr	om (a)(ii))					
	Bude	let Pa	vments					
Jan	3.96	58	, mente					
Feb	4 0	32	\$3 968					
March	4 06	54	\$4 032					
April	3 71	2	\$4 064					
			[1of]					
Labour	payments	s (of fro	m (a)(iii))					
	. ´ Bas	ic I	Bonus Pa	yments				
Jan	3 02	24						
Feb	2 9	76	208	\$3 184				
March	3 02	24	192	\$3 216				
April	3 04	8	208	\$3 256				
	[1of]	[1]					
Fixed pr	oduction	overhe	ade					
	cost - da	nreciati	n = \$18 00	0 - \$6 000) = \$12,000			
Monthly	navment	r = 12	100/12 = 000	000 yo 000	$y = y_{12} 000$			

Question Number	Answer (AO5) 1	Mark				
4(b)	Award 1of mark based on cash budget in (a)(iv).					
	The business has a cash flow problem. (1of)	(1)				

Question Number	Answer (AO1) 4	Mark
4(c)	Award 1 mark for each point up to a maximum of 2 marks per use of cash budget. (2x2)	
	Answers may include:	
	 Cash shortages revealed early (1) and arrangements can be made for overdraft on best terms (1) 	
	 Cash surpluses revealed (1) and can be invested. (1) 	
	 Can highlight difficulties e.g. paying suppliers (1) and take appropriate action e.g. liaise with 	
	suppliers (1).	(4)

TOTAL FOR QUESTION 4 – 24 MARKS

Question Number	Answer (AO1) 2	Mark
5 (a)(i)	Award 1 mark for each point up to a maximum of 2 marks.	
	Net present value:	
	states if there is a discounted net cash inflow or outflow.(1)	(2)

Question Number	Answer (AO1) 2	Mark
5(a)(ii)	Award 1 mark for each point up to a maximum of 2 marks.	
	Internal rate of return:	
	An investment appraisal technique that estimates the interest rate (cost of capital)(1) at which	
	there is no inflow or outflow of cash.(1)	(2)

Question Number	Answer (AO2) 2		Mark
5 (b)(i)	Award 2 marks for calculations.		
	Machine A		
	Annual depreciation (800 000 - 120 000)/5	= 136 000 (1)	
	Annual profit	100 000	
	Annual cash flow	\$ <u>236 000 (</u> 1)	(2)

Question Number	Answer (AO2) 2		Mark				
5 (b)(ii)	Award 2 marks for calculations.						
	Machine B						
	Annual depreciation (900 000 - 250 000)/5	$= 130\ 000\ (1)$					
	Annual profit	<u>110 000</u>					
	Annual cash flow	\$ <u>240 000 (</u> 1)	(2)				

Question Number	Answer (AO2) 6						Mark
5 (c)	Award 1 mark for both correctly calculated 'Present values ' (years 0-4 and total). Award 1 mark each for 'Present values' for machine A and machine B in year 5. OF to be awarded if Year 1 cash flows brought down from 5(b)(i) and 5(b)(ii). Net present-day value:							
			Machine	A		Machir	ne B	
		Cash	Discount	Present	Cash	Discount	Present	
		flow	factor	value	flow	factor	value	
	Year 0	(800)	1.000	(800)	(900)	1.000	(900) (1)	
	1	236	0.893	211	240	0.893	214 (1of)	
	2	236	0.797	188	240	0.797	191 (1of)	
	3	236	0.712	168	240	0.712	171 21-5	
	4	236	0.636	150	240	0.636	152 ⁽¹⁰⁷⁾	
	5	356	0.567	202 (1)	490	0.567	278 (1of)	
				119			106 (1of)	
	All preser	nt value f	igures rounde	ed to the neare	est \$'000		、 <i>`</i> ,	(7)

Question Number	Answer (AO4) 1	Mark
5 (d)	Award 1 mark for reason based on answer to (c). Machine A will result in a higher net present value than Machine B. Therefore advice is to purchase Machine A. (1of)	(1)

Question Number	Answer (AO3) 4	Mark
5(e)	Award 1 mark for each advantage (up to 2 marks) and 1 mark for each disadvantage (up to 2 marks).	
	 Advantages It takes into account all future cash flows. (1) It takes into account the 'time value' of money. (1) Helps show if the investment meets the target rate.(1) 	
	 Disadvantages It assumes that the interest rate/cost of capital remains constant through the life of the investment. (1) It is difficult to accurately predict future costs and revenues. (1) 	(4)

TOTAL FOR QUESTION 5 – 20 MARKS TOTAL FOR PAPER – 100 MARKS