

Mark Scheme

June 2017 **Results** 

# PEARSON LCCI Level 3 Certificate in Cost and Management Accounting (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 (1)	Mark
1(a)(i)	Award 1 correct answer mark Reorder level = maximum usage x maximum lead time	
	= 48 kg X 18 days = <b>864 kg (1)</b>	(1)

Question number	Answer AO2 (2)	Mark
1(a)(ii)	Award 1 method mark and 1 mark for correct (OF) answer Minimum inventory level = Reorder level less (average usage x average lead time)	
	= 864 (of) - (40 x 15) 600 (1) = 264 kg (1of)	(2)

Question number	Answer AO2 (3)	Mark
1(a)(iii)	Award 2 method marks and 1 mark for correct (OF) answer	
	Maximum inventory level = Reorder level less [minimum usage x minimum lead time) plus reorder quantity	
	864 (of) - (32 x 12) 384 = <b>480 (1)</b> 480 + 3 000 <b>(1)</b> = <b>3 480 kg (1of)</b>	
		(3)

Question number	Answer AO2 (2)	Mark
1(a)(iv)	Award 1 method mark1 and 1 mark for correct answer	
	Average inventory level = Reorder quantity / 2 + minimum inventory level	
	= (3 000 / 2) 1 500 + 264 (1of) = 1 764 kg (1of)	(2)

Question number	Answer AO2 (2)	Mark
1(b)(i)	Award 1 method mark and 1 mark for correct answer	
	Annual ordering cost	
	Number or orders required = 4 500 x 12 = 54 000 / 2 000 =	
	<b>27 orders (1)</b> × \$380 = <b>\$10 260 (1)</b>	(2)

Question number	Answer AO2 (3)	Mark
1(b)(ii)	Award 2 method marks and 1 mark for correct answer	
	Inventory holding costs	
	Average inventory = 2 000 / 2 = 1 000 + 1800 = 2 800 (1)	
	2 800 x \$28 = <b>\$78 400 (1)</b> x 20% = <b>\$15 680 (1)</b>	(3)

Question number	Answer AO1 (2) AO3 (2)	Mark
1(c)	Award 1 mark for identifying each method (two required) and 1 mark for related explanation (two required)	
	Password (1) to restrict access to files and folders (1)	
	Mechanical security devices (keypads) (1) to restrict access to offices/buildings/rooms (1)	
	Encryption (1) to restrict external hacking (1)	
	Training to raise awareness (1) of the need to maintain security procedures (1)	(4)

Question number	Answer (AO1) 2 (AO3) 2	Mark
1(d)	Award 1 mark for identifying a consequence and 1 mark for related explanation (two required)	
	Loss of reputation (1) - which could lead to loss of clients (1)	
	Sensitive information is leaked <b>(1)</b> - competitors could exploit this leak <b>(1)</b>	
	Legal proceedings (1) - damaged parties take action to recover losses (1)	
	Increase costs (1) - increased liability insurance (1)	
	To protect copyright/patents/designs (1) to prevent a loss of competitive edge (1)	(4)

## Total for question 1 - 21 marks

Question number	Answer AO2 (2)	Mark
2(a)	Award 1 method mark and 1 correct answer mark.	
	Fixed overhead recovery rate =	
	Budgeted fixed overhead $132\ 300$ (1) = \$ 14.00(1)Budgeted hours (2 100 x 4.5)9 450	(2)

Question number	Answer AO2 (2)	Mark
2(b)(i)	Award 1 method and 1 correct answer mark. Variance must state Adverse for the second mark.	
	Fixed overhead expenditure variance Budget \$132 300 less Actual \$141 750 (1) = <b>9 450 Adverse (1)</b>	(2)

Question number	Answer AO2 (2)	Mark
2(b)(ii)	Award 1 method mark and 1 OF answer mark. Variance must state Favourable for the second mark.	
	Fixed overhead volume variance	
	Standard hours (2 416 x 4.5)10 872Budgeted hours (2 100 x 4.5) $9 450$ (316 x 4.5)1 422 (1) x \$14.00 (of)	
	19 908 Favourable (1of)	(2)

Question number	Answer AO2 (2)	Mark
2(b)(iii)	Award 1 method mark and 1 OF answer mark. Variance must state Favourable for the second mark.	
	Fixed overhead capacity variance	
	Budgeted hours 9 450 Actual hours <u>11 235</u> 1 785 (1) x <b>\$14</b> (of) = <b>24 990 Favourable (1of)</b>	(2)

Question number	Answer AO2 (2)	Mark
2(b)(iv)	Award 1 method mark and 1 OF answer mark. Variance must state Adverse for the second mark.	
	Fixed overhead efficiency variance	
	Standard hours (2 416 x 4.50)10 872Actual hours $\frac{11 235}{363 (1) \times $14 (of)}$ = 5 082 Adverse (1of)	
		(2)

Question number	Answer AO4 (2)	Mark
2(c)	Capacity Efficiency Volume Expenditure Total o/h variance 24 990 F - 5 082 A = <b>19908 F</b> (1) - 9 450 A = <b>10 458 Favourable (1)</b>	(2)

Question number	Answer AO1 (2) AO3 (2)	Mark
2(d)	1 mark for statement and 1 mark for development x 2 required. Maximum 2 marks per standard.	
	Ideal standards are only possible under the most <b>efficient</b> <b>operating conditions</b> - they make no allowance for normal losses, waste or machine downtime (1). Ideal standards are unlikely to be used in practice as they are unrealistic (1) / are likely to have an adverse impact on employee motivation (1).	
	An attainable standard assumes <b>realistic levels of</b> <b>operation</b> , making allowances for normal losses, waste or machine downtime (1). Attainable standards are thought to provide the most realistic basis to which actual costs should be compared (1) / may have a motivating effect on employees (1).	
		(4)
	Total for question 2 - 16 ma	arks

Question number	Answer AO2	(3)			Mark
3(a)(i)	Award 1 ma Award 1 ma mark for th	ark for botl ark for thre e balance.	n entries on the deb e entries on the cre	oit side. Edit side and	
			<b>Raw Materials</b>	Account	
		\$		\$	
	Balance b/d	57 500	WIP	333 400	
	Creditors	367 800	Materials – P&L	7 500	
			Prod O/heads	19 800	
			Balance c/d	<u>64 600 (</u> 1)	
		<u>425 300</u>		<u>425 300</u>	( <b>2</b> )
					(3)

Question number	Answer AO2 (3)				Mark	
3(a)(ii)	Award 1 mark for first two correct entries and 1 mark for next two correct entries on the debit side. Award 1 mark for correct entry on the credit and the correct balance.					
		\$	W I P Account \$	:		
	Balance b/d Production Overheads Wages	34 680 86 250 74 750	Finished Goods	488 290		
	Material	<u>333 400</u> 529 080	Balance c/d	<u>40 790</u> 529 080	(3)	

Question number	Answer AO2 (	(2)			Mark
3(a)(iii)	Award 1 ma Award 1 ma	rk for both e rk for both e	entries on the de entries on the cr	ebit side. edit side.	
		Finis	hed Goods Accour	nt	
		\$		\$	
	Balance b/d	40 900	COGS – P & L	508 230	
	WIP	<u>488 290</u>	Balance c/d	<u>20 960</u>	
		529 190		529 190	
					(2)

Question number	Answer AO2 (4)				Mark
3(a)(iv)	Award 1 mark for first for next two correct e mark for over recover for correct entry on th	t two corr ntries on y of over ne credit s	rect entries an the debit side heads. Award side.	nd 1 mark e. Award :   1 mark	
	Production Overheads Account				
		\$		\$	
	Raw Materials	19 800			
	Wages	27 400	WIP	86 250	
	Creditors/Expenses	16 250			
	Machinery depreciation	22 480			
	Over recovery of o/h – P & L	320			
		<u>86 250</u>		<u>86 250</u>	
					(4)

Question number	Answer AO2 (4)				Mark	
3(a)(v)	Award 1 mark for first two correct entries on the debit side. Award 1 mark for next two correct entries on the debit side. Award 1 mark for profit figure. Award 1 mark for both entries on the credit side.					
		Profit & Los	s Account			
		\$	\$			
	Finished Goods	508 230	Sales 6	594 500		
	Admin o/heads	54 200	Over rec'd prod o/h	320 (of)		
	S & D o/heads	32 600				
	Materials written off	7 500				
	Profit c/d	<u>92 290 (</u> of)				
		<u>694 820</u>		<u>694 820</u>		
					(4)	

Question number	Answer AO1 (2) AO3 (2)	Mark
3(b)	In a non-integrated system the cost accounts are kept separate from the financial accounts and it will be necessary for the two sets of accounts to be reconciled with the use of control accounts (1).	
	Using control accounts will enable the company to frequently check the accuracy of the accounts and highlight any errors <b>(1)</b> .	
	Any over or under absorbed production overhead can be carried forward as a balance into the next period's accounts (1).	
	The financial ledger control account will keep a record of all the individual control account balances, as a further means of checking on the accuracy of the control accounts (1).	
		(4)

Total for question 3 - 20 marks

Question number	Answe	r AO2 (	6)					Mark
4(a)	Award 1 mark for each correct year zero figure. Award 1 mark for each correct batch of DCF calculations and 1 mark for each correct NPV. Project Bee must be negative.							
	Net p	r <b>esent</b> P	value (N Project Aye	PV) (disco	unted	at 12%	) Bee	
	Year	Cash flow \$000	Factor	Present value \$000	Cash flow \$000	Factor	Present value \$000	
	0	(600)	1.000	(600.00) <b>(1)</b>	(600)	1.000	(600.00) <b>(1)</b>	
	1	260	0.893	232.18	140	0.893	125.02	
	2	290	0.797	231.13	160	0.797	127.52	
	3	150	0.712	106.80	220	0.712	156.64	
	4	90	0.636	<u>57.24</u> (1)	225	0.636	143.10 <b>(1)</b>	
			NPV =	27.35 1of		NPV =	(47.72) 1of	
								(6)

Question number	Answer AO5 (2)	Mark
4(b)	Project Aye should be selected as it has a positive NPV (1). Project Bee would never be selected as it has a negative NPV, which indicates that it does not make a positive return on the investment (1).	(2)

Question number	Answer AO2 (4)				
4(c)(i)	Award 1 mark for the collective DCF calculations. Award 1 mark for the NPV figure. Award 1 mark for the IRR method and 1 mark for the final calculation.				
	Internal rate of r	eturn (IRR) (a	liscounted at 15%)		
		Project	Aye		
	Vear C	ash flow Facto	Present r value		
	\$	000	\$000		
	0 (6	500) 1.000	(600.00)		
	1 2	0.870	226.20		
	2 2	290 0.756	219.24		
	3 ]	0.658	98.70		
	4	90 0.572	<u>51.48</u> <b>1</b>		
		NPV	= (4.38) 10f		
	IRR for Project Aye = 12% + {3% × [ = 14.58% (1of)	e 27.35 <b>(of)</b> ÷ (27	7.35(of) + 4.38(of))]} (1)		
				(4)	

Question number	Answer AO2 (3)					
4(c)(ii)	Award 1 mark for the DCF calculations. I mark for the method and 1 mark for the answer. All of which must be discounted.					
	Discounted payback (discounted at 12%)					
	Project Aye					
	Year  Present values cumulative DCF    \$000  \$000					
	0	(600.00)	(600.00)			
	1	232.18	(367.82)			
	2	231.13	(136.69)			
	3	106.80	(29.89) 1	L		
	4	57.24				
	Payback period f = <b>3 +</b> (29.89 / = <b>3 years (1of</b> )	or Project Aye 57.24 x 12 ) <b>6.2</b> ( ) and 6 months	6 (1of)	(3)		

Question Number	Answer (AO1) 2 (AO3) 2	Mark		
4(d)	Award 1 AO1 mark for technique and 1 AO3 mark for example.			
	An example of a short-term decision might be "increasing production over the next three months in order to meet an unexpected increase in demand" (1).			
	Techniques that are used include: break-even analysis; limiting factors; and marginal costing (1).			
	Award 1 AO1 mark for technique and 1 AO3 mark for example.			
	An example of a long-term decision might be the need to build a new production line, buy a new machine or introduce a new (or improved) product (1).			
	The techniques that are used come under the heading of 'capital investment appraisal': payback; discounted cash flow; average rate of return; internal rate of return; and absorption costing (1).			
		(4)		

## Total for question 4 - 19 marks

Question	Answer (AO2) 6					
Number					Mark	
5(a)	Absorption costing Workings: 3 000 units of Exe x 4 h x 4 hours = 10 000; and 2 000 units of This equals <b>28 000 (1)</b> direct labour <b>1</b> of Workings: Exe = 4 labour hours x \$14.60 = \$58.40; Zed = 3 x \$14.60 = \$43.8 Production overhead cost per unit Direct Materials (\$9.60 per kg) Direct Labour (\$11.20 per hour) Overheads TOTAL	ours = 12 f Zed x 3 our hours hours = <b>\$</b> \$14.60 = 30 <b>Exe</b> 48.00 44.80 58.40 <b>151.20</b>	2 000; 2 50 hours = 6 \$ <b>14.60 pe</b> \$58.40; W Whye 38.40 44.80 58.40 <b>141.60</b>	00 units of 000. <b>r labour</b> /hye = 4 x 28.80 33.60 43.80 <b>106.20</b>	f Why hour < 1 10f 10f	PIGER
						(6)

Question Number							Mark
5(b)	Activity based costing - workings						
	Inspection    \$120 000 / 600 = \$200 per production run 1      Exe = \$200 x 150 = \$30 000 / 3 000 units = \$10.00 per unit      Whye = \$200 x 200 = \$40 000 / 2 500 units = \$16.00 per unit      Zed = \$200 x 250 = \$50 000 / 2 000 units = \$25.00 per unit						
	Machining $$112\ 200\ /\ 22\ 000\ =\ $5.10\ per machine hour$ 1Machine hours = $(2\ x\ 3\ 000)\ 6\ 000\ +\ (4\ x\ 2\ 500)\ 10\ 000\ +\ (3\ x\ 2\ 000)\ 6\ 000\ =\ 22\ 000\ hours$ Exe = 2 m/c hrs x \$5.10 = \$10.20 Whye = 4 m/c hrs = \$20.40Zed = 3 m/c hrs = \$15.30						
	Packaging    \$49 500 / 550 = \$90 per order    1      Exe = \$90 x 150 = \$13 500 / 3 000 units = \$4.50 per unit      Whye = \$90 x 175 = \$15 750 / 2 500 units = \$6.30 per unit      Zed = \$90 x 225 = \$20 500 / 2 000 units = \$10.12 per unit						
	Material Handling    \$127 100 / 31 000_ = \$4.10 per kg used    1      Material quantity:    (3,000 x 5kg) 15,000 + (2,500 x 4kg) 10,000 +    (2,000 x 3kg) 6,000 = 31,000    Exe = 5 kg x \$4.10 = \$20.50    Whye = 4      kg x \$4.10 = \$16.40    Zed = 3 kg x \$4.10 = \$12.30						
	Production overhead cost per unit						
	Inspection / Set up Machinery costs Packaging Material handling Overheads (subtota	costs	Exe 10.00 10.20 4.50 20.50 <b>45.20</b>	Whye 16.00 20.40 6.30 16.40 <b>59.10</b>	Zed 25.00 15.30 10.12 12.30 62.72	1of 1of 1of 1of	
		Evo	Whyo		Zod		
	Direct Materials	48.00	38.40		28.80 <b>(1</b>	for	
	Direct Labour	44.80	44.80		33.60 bc	oth rows)	
	Overheads	45.20	59.10		62.72	· - )	
	TOTAL	138.00 10	f 142.30	1of	125.12 10	of	
							(12)

Question Number	Answer (AO4) 4 (AO5) 2	Mark			
5 (c)	Award up to 4 AO4 marks for analysis - 2 marks for absorption costing; 2 marks for ABC. Award up to 2 AO5 marks for conclusion. Answers may include:				
	Workings: Using absorption costing the overheads for all three products are: Exe \$58.40; Whye \$58.40; and Zed \$43.80. Using ABC, the overheads for each product would be: Exe \$45.20; Whye \$59.10; and Zed \$57.72				
	Analysis: When using absorption costing, not all overhead costs can be related to the absorption rate being applied, i.e. labour activity (1) so the use of absorption costing would appear to be inappropriate (1).				
	With ABC, costs are allocated on a discreet usage basis. Products which use more of an activity are charged a higher proportion of the overall cost (1) Product Zed has the highest number of production runs and orders, and should therefore be allocated the greatest proportion of inspection and packaging costs (1).				
	Products made in smaller batches (i.e Zed) cause an increase in costs (1) and should therefore be charged more (pro rata) using ABC, than those made in larger batches (1).				
	<b>Evaluation</b> Activity based costing builds up a more realistic allocation of costs (1) an advantage of which could be e.g. a more accurate cost/selling price can be calculated for specific products (1)				
	Switching methods would see the overhead cost for Exe fall from \$58.40 to \$45.20, and the overhead costs for Zed rise from \$43.80 to \$57,72 <b>(1).</b>				
	It can be seen that product Zed has now been charged with a more appropriate cost. (1)	(6)			
	Total for question 5 - 24 marks				

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TOTAL FOR PAPER = 100 MARKS