

Mark Scheme

December 2016 Results

PEARSON LCCI (ASE20098) Level 3 Certificate in Cost and Management Accounting



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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 (3)	Mark
1(a)(i)	Award 1 mark for contribution and 1 mark for break-even units. Award 1of mark for break- even revenue.	
	B <b>reak even in units</b>	
	Selling price \$106.00 less variable costs \$76 (\$23.50 + \$38.00 + \$14.50) = <b>\$30 contribution 1</b>	
	Break even = Fixed overheads \$102,500 / \$30 = <b>3 417</b> units 1of	
	BE in revenue = 3 417 x \$106 = <b>\$362 202 1of</b>	(3)

Question Number	Answer AO2 (2)	Mark
1(a)(ii)	Award 1 mark for margin of safety in units and 1of mark for MOS percentage.	
	Margin of safety = 7 000 - 3 417 = <b>3 583</b> (1of) / 7 000 = <b>51.20% of</b>	
		(2)

Question	Answer AO2 (2)	
Number		Mark
1(a)(iii)	Award 1 mark for profit before fixed costs and 1of mark for final profit figure.	
	Profit = 7 000 x \$30 = \$210 000 (1of) - \$102 500 = \$107 500 1of	(2)

Question Number	Answer AO2 (3)	Mark
1(b)(i)	Award 1 mark for contribution. Award 1of mark for break even in units and 1of mark for break in revenue.	
	Selling price \$106.00 less variable costs \$66.50 (\$23.50 + <b>\$28.50</b> + \$14.50) = <b>\$39.50 contribution 1</b>	
	Break even = Fixed overheads \$133 250 (\$102 500 x 1.30) / \$39.50 = <b>3 374 units 1of</b>	
	BE in revenue = 3 374 x \$106 = <b>\$357 644 1of</b>	(3)

Question Number	Answer AO2 (2)	Mark
1(b)(ii)	Award 1 mark for margin of safety in units and 1of mark for MOS percentage. Margin of safety = $7000 - 3374 = 3626$ (1) / $7000 =$	
	51.80% 1of	(2)

Question Number	Answer AO2 (2)	Mark
1(b)(iii)	Award 1 mark for profit before fixed costs and 1of mark for final profit figure.	
	Profit = 7 000 x \$39.50 = <b>\$276 500 (1) -</b> \$133 250 = <b>\$143 250 1of</b>	(2)



Question Number	Answer AO4 (3) AO5 (1)	Mark
1(d)	Award 3 marks for analysis and 1 mark for recommendation. Max 4.	Mark
	Answers may include:	
	It would be worthwhile installing the new machinery The company would have a slightly lower break even (1) and a greater margin of safety (1) The company would make more profit at output/sales of 7,000 units (1) Using additional machinery might improve the quality of the product (1)	
	It would not be worthwhile installing the new machinery Possible redundancies (1) Availability of funds to purchase machine (1)	
	<b>Recommendation</b> Company should/should not install machinery (1of)	(4)

## Total for Question 1 = 24 marks

Question Number	Answer AO2 (3)		Mark
2(a)(i)	Award 1 mark for all corr Award 1 mark for all corr (excluding work-in-progr calculation of work-in-progr	ect entries on the debit side. ect entries on the credit side ess). Award 1 OF for ogress on the credit side.	
	Raw Mate	ials Account	
	Balance b/d Creditors         61,800 1 183,900           245,700	Work-in-progress         125,430 1           Mats written off – P&L         1,875           Production overheads         9,750           Balance c/d         108,645           245,700         1	(3)

Question Number	Answer AO2 (3)	Mark		
2(a)(ii)	Award 1 mark for all correct entries on the debit side (allowing OF for raw materials). Award 1 mark for balance c/d on the credit side. Award 1 OF for finished goods and placement on the credit side.			
	W I P Account			
	Balance b/d       \$       \$       \$         Wages       1       36,390       Finished goods       232,500       1of         Raw materials       125,430       of       of			
	Prod overheads         43,250         Balance c/d         9,935 (1)           242,435         242,435         242,435	(3)		

Question	Answer AO2 (2)		
Number		Mark	
2(a)(iii)	Award 1 mark for correct bal b/d and work-in-progress (of) on the debit side. Award 1 mark for cost of sales (of) and correct bal c/d on credit side.		
	Finished Goods Account		
	\$         \$         \$           Balance b/d         ↓ 45,960         Cost of sales         259,500 of ↓           Work-in-progress         1 232,500 of ↓         Balance c/d         18,960 ↓           278,460         278,460         278,460         18,960 ↓		
		(2)	

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Question	Answer AO2 (4)	
Number		Mark
2(a)(iv)	Award 1 mark for first two entries and 1 mark for next two entries on the debit side. Award 1 mark for over- recovery of overhead on the debit side. Award 1 mark for work-in-progress and placement on the credit side.	
	Production Overheads Account	
	\$ \$	
	Indirect raw materials 1 9,750 Indirect wages 13,850 Work-in-progress 43,250 1 Indirect prod expenses 1 6,450 Machinery depreciation 12,780 Over- recovery of overhead 420 1	
	<u>+0,200</u> <u>+0,200</u>	(4)

Question Number	Answer AO1 (2)	Mark
2(b)	An integrated accounting system is a set of records that provides financial and cost accounting information (1) using a common input of data (1)	(2)

### Total for question 2 = 14 marks

Question Number	Answer AO2 (1)	Mark
3(a)(i)	Award 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Direct material total	
	Standard price x standard usage (\$4 x 5kg x 10 600)       212 000         Actual price x actual usage (55 000 x \$3.80)       209 000 <b>3 000 Fav 1</b>	(1)

Question Number	Answer AO2 (2)	Mark
3(a)(ii)	Award 1 method mark and 1 correct answer mark. Variance must state correct Adverse or Favourable (accept Adv and Fav) for the second mark.	
	Direct material price variance	
	Actual price x actual usage (55 000 x \$3.80)       209 000         Standard price x actual usage (\$4 x 55 000kg)       220 000       (1)         11 000 Fav       1	(2)

Question Number	Answer AO2 (2)	Mark
3(a)(iii)	Award 1 method mark and 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Direct material usage variance	
	Standard price x actual usage (see above) 220 000 Standard price x standard usage (\$4 x 5kg x 10 600) 212 000 (1) 8 000 Adv 1	(2)

Question	Answer AO2 (1)	
Number		Mark
3(a)(iv)	Award 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Direct labour total	
	Standard rate x standard hours \$6 x 4hrs x 10,600       254 400         Actual rate x actual hours (41 340 x \$6.20)       256 308         1 908 Adv 1	(1)

Question Number	Answer AO2 (2)	Mark
3(a)(v)	Award 1 method mark and 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Direct labour rate variance	
	Actual rate x actual hours (41 340 x \$6.20)       256 308         Standard rate x actual hours (\$6 x 41 340)       248 040         8 268 Adv       1	(2)

Question	Answer AO2 (2)	
Number		Mark
3(a)(vi)	Award 1 method mark and 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Direct labour efficiency variance	
	Standard rate x actual hours (see above) 248 040 Standard rate x standard hours (\$6 x 4hrs x 10,600) 254 400 (1) 6 360 Fav 1	(2)

Question Number	Answer AO2 (2)		Mark
3(a)(vii)	Award 1 method mark and 1 correct answer r Variance must state Adverse or Favourable (a and Fav).	nark. Iccept Adv	
	Fixed overhead variance: expenditure variance	e	
	Actual overhead – given       224 470 ]         Budgeted overhead 10,000 units x \$22.00       220 000 ]         4 470 Adv       1		(2)

Question Number	Answer AO2 (2)	Mark
3(a)(viii)	Award 1 method mark and 1 correct answer mark. Variance must state Adverse or Favourable (accept Adv and Fav).	
	Fixed overhead variance: volume variance	
	Overhead absorption rate x (actual output – budgeted output) $22.00 \times (10\ 600\ -\ 10\ 000)$ (1) = 13 200 Fav (1)	(2)

Question	Answer AO1 (2)	
Number		Mark
3(b)(i)	Award 1 mark for each part of the statement. Max 2 A standard cost is a predetermined <b>unit</b> cost (1). It is a target cost that should be achievable under normal efficient operating conditions (1).	(2)

Question	Answer AO1 (2)	
Number		Mark
3(b)(ii)	Award 1 mark for each part of the statement. Max 2 The standard hour is the <b>quantity</b> of work achievable under expected operating conditions levels in an hour (1). It is a measure of performance and not time spent (1).	(2)

Question	Answer AO1 (2)	
Number		Mark
3(c)	Award 1 mark for reason. Award 1 mark for development. Max 2. Investigation of variances is important: Two marks for one answer:	
	To take advantage of favourable situations (1) or to attempt to correct adverse ones. (1) To determine what external factors might cause the variance (1) for example seasonal/economic factors. (1) To determine if the variance is caused by internal factors (1) and to pinpoint who or what is responsible for the variance. (1) To enable standards to be revised where necessary (1) and to promote good working practice. (1)	(2)

# Total for question 3 = 20 marks

Question Number	Answer AO2 (4)	Mark
4(a)	Award 1 mark for each of the three components of the working capital cycle and 1 OF mark for the total, providing there are no aliens.	
	Working capital cycle	
	Inventory holding period = $(455 / 2565) \times 365 =$ 65 days1Add: Trade receivables collection period = $(630/4275) \times 365 = 54$ days1Less: Trade payables payment period = $(475/2565) \times 365 = (68)$ days1Working capital cycle51 days1 OF	(4)

Question Number	Answer AO2 (4)	Mark				
4(b)	Award 1 mark for each calculation of the inventory period. Award 1 mark for both the trade payables and trade receivable totals. Award 1 OF mark for the final increase figure.					
	Expected change in working capital cycle					
	Inventory holding period = $(455 \times 1.2)$ <b>546</b> / $(2\ 565 \times 1.15)$ <b>2 950 (1)</b> $\times 365 =$ <b>68 days (1)</b> <u>Add</u> : Trade payables collection period = <b>54 of</b> + 24 = <b>78 days</b> <u>Less</u> : Trade receivables payment period = <b>68 of</b> + 12 = <u>(80)</u> days 1 OF Working capital cycle <u>66</u> days					
	I herefore the expected change is an increase of 15 days (66-51) (1 OF)	(4)				

Question	Answer AO2 (6)					
Number		Mark				
4(c)	Award 1 mark for inventory total. Award 1 mark for part working and 1 mark for total on each of the trade receivables and trade payables.					
	Expected net working capital investment \$000					
	Increase in Inventory = $[(\$455 \times 1.2) \$546 - \$455 = 91 1$ Add: Increase in trade receivables = $[(\$4 275 \times 1.15) \$4 916.25 \times (78 \div 365)] = \$1 051 (10f) - \$630 = 421 10f$ Less: Increase in trade payables = $[(\$2 565 \times 1.15) \$2 949.75 \times (80 \div 365)] = \$647 (10f) - \$475 = (172) 10f$ Not investment in working capital					
	(Award the total mark provided there is evidence of net figures)					
		(6)				

Question Number	Answer AO3 (2) AO4 (2) AO5 (2)	Mark
4(d)	Award 4 marks for explanation. Award 2 marks for importance.	
	Working capital management involves the careful control of inventory levels (1) with the aim of not carrying too much, too little, or obsolete inventory. (1)	
	Aiming to keep the trade receivables payment period at a low level by seeking prompt payment. (1)	
	Aiming to delay the payment of trade payables (without incurring any penalties). (1)	
	Efficient working capital management will ensure that a company has sufficient cash to meet its day-to-day operational needs (1) with the overall aim of minimising the risk of insolvency/illiquidity. (1)	(6)

### Total for question 4 = 20 marks

Question Number	Answer AO2 (16)							Mark
5(a)	Award a total of 8 marks as indicated.							
	$\label{eq:matrix} \begin{array}{l} \underline{\text{Material handling X}} & \$75\ 840\ /\ \textbf{63\ 200\ kg} = \$1.20\ \text{per kg used} & (1) \\ \hline \text{Material} & (4\ 000\ x\ 5\text{kg})\ 20\ 000\ +\ (3\ 200\ x\ 9\text{kg})\ 28\ 800\ +\ (2\ 400\ x\ 6\text{kg})\ 14\ 400 \\ \hline \text{Total material used} = \textbf{63\ 200\ kg\ (1)} \\ \hline \text{Product One} = 5\ \text{kg x\ \$1.20} = \$\textbf{6.00\ per unit} \\ \hline \text{Product Two} = 9\ \text{kg x\ \$1.20} = \$\textbf{10.80\ per unit} \\ \hline \text{Product Three} = 6\ \text{kg x\ \$1.20} = \$\textbf{7.20\ per unit} \\ \hline \end{array}$							
	Material handling Y $63\ 800\ /\ 44\ 000\ kg = \$1.45\ per\ kg\ used$ (1)Material (4\ 000\ x\ 4kg)\ 16\ 000\ +\ (3\ 200\ x\ 2kg)\ 6\ 400\ +\ (2,400\ x\ 9kg)\ 21\ 600Total material used = 44,000 kg (1)Product One = 4 kg x \$1.45 = \$5.80\ per unitProduct Two = 2 kg x \$1.45 = \$2.90\ per unitProduct Three = 9 kg x \$1.45 = \$13.05\ per unit							
	<u>Set up</u> $$115 200 / 400$ production runs = <b>\$288 per production run</b> (1) Product One = $$288 \times 160$ prod runs = $$46 080 / 4 000$ units = <b>\$11.52</b> per unit Product Two = $$288 \times 120$ prod runs = $$34 560 / 3 200$ units = <b>\$10.80</b> per unit Product Three = $$288 \times 120$ prod runs = $$34 560 / 2 400$ units = <b>\$14.40</b> per unit							
	$\frac{Machining}{M/C} \frac{102,000}{20,000} = RM 5.00 \text{ per machine hour (1)}$ $\frac{M/C}{M/C} = \frac{1000}{100} \times 1.5 + 0.000 + (3,200,3) + 0.0000 + (2,400,3) + 0.00000 + (2,400,3) + 0.0000000000000000000000000000000000$							
	Packaging \$71 160 / 235 orders = <b>\$302.81 per order (1)</b> Product One = \$302.81 x 100 orders = \$30 281 / 4 000 units = <b>\$7.57</b> per unit Product Two = \$302.81 x 75 orders = \$22 711 / 3 200 units = <b>\$7.10</b> per unit Product Three = \$302.81 x 60 orders = \$18,169 / 2 400 units = <b>\$7.57</b> per unit							
	Award a total of 8 marks as indicated.							
	Production overhead c	ost per uni Product Or \$/unit	t ne F	Product T \$/unit	wo	Product Thi \$/unit	ree	
	Material handling X Material handling Y Set up Machining costs Packaging TOTAL	6.00 5.80 11.52 7.50 7.57 <b>38.39</b>		10.80 2.90 10.80 15.00 7.10 <b>46.60</b>		7.20 13.05 14.40 10.00 7.57 <b>52.22</b>	1 1 1 1	
	Direct material X Direct material Y Direct labour	37.50 60.00 37.50		67.50 30.00 30.00		45.00 135.00 22.50		
	Total Cost	173.39	(1of)	174.10	(1of)	254.72	(1of)	(16)

Question Number	Answer AO4 (5) AO5 (1)	Mark		
5(b)	Award up to 5 marks for analysis points – maximum of 4 marks for arguing one side. Award 1 mark for conclusion. Max 6 marks Answers may include:			
	<b>In favour of ABC costing</b> With ABC costs are allocated on a discreet usage basis. Products that use more of an activity are charged a higher proportion of the overall cost <b>(1)</b> e.g. Product Three has the highest number of production runs per unit and should therefore be allocated the greatest proportion of set- up costs per unit. <b>(1)</b>			
	Products made in smaller batches (i.e. Product Three) cause an increase in costs (1) and should therefore be charged more (pro rata) using ABC than those made in larger batches. (1)			
	Using absorption costing, the overheads for Products One, Two and Three are \$53.50, \$42.80 and \$32.10. Using ABC, the overhead costs are \$38.39, \$46.60 and \$52.22. Activity- based costing builds up a more realistic allocation of costs (1) an advantage of which could be, e.g., a more accurate selling price can be calculated for specific products. (1)			
	Not all costs are able to be related to, e.g. labour activity/machine hours. (1)			
	Against ABC costing ABC is expensive and time- consuming to introduce (1) Possibly difficult to identify cost drivers (1)			
	<b>Conclusion</b> It would be appropriate for the company to use ABC as cost allocation is more accurate. <b>(1)</b>	(6)		

Total for question 5 = 22 marks