Mark Scheme

Sample Assessment Materials

Pearson LCCI
Level 3 Certificate in Advanced Business Calculations (VRQ) (ASE3003)

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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 be 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 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	Mark
1		

	Investment A	Investment B	Investment C	Investment D
Sum invested	£150,000	£110,000	**£85,000**	**£43,250**
Rate of interest per annum	3%	3.5%	4.5%	4%
Time invested (years)	5	6	**5**	6
Final amount (Principle + Interest)	£173,891	**£135,218**	£105,925	£54,725
Interest earned	£23,891	**£25,218**	£20,925	£11,475

M1r

Investment B
Amount = £110,000 x 1.0356 = £135,218 **M1 A1**
Interest earned = £135,218 - £110,000 = £25,218 **M1 A1**

Investment C
Sum invested = £105,925 - £20,925 = £85,000 **M1 AI**
Time invested (n years), given by: £85,000 x 1.045n = £105,925
n = 1, amount = £85,000 x 1.0451 = £88,825
n = 2, amount = £85,000 x 1.0452 = £92,822
n = 3, amount = £85,000 x 1.0453 = £96,999
n = 4, amount = £85,000 x 1.0454 = £101,364
n = 5, amount = £85,000 x 1.0455 = £105,925 so n = 5 **M1 A1**

Investment D
£54,725 = Sum invested x 1.046 = Sum invested x 1.26532 **M1**
Sum invested = £54,725 / 1.26532 = £43,250 **A1**
Interest earned = £54,725 - £43,250 = £11,475 **M1 A1**

(13)

(Total for Question 1 = 13 marks)

Question number	Answer	Mark
2 (a)	Commission = 0.25% x 15,000 x £4.50 = £168.75 Cost of shares including commission = (15,000 x £4.80) + £168.75 = £72,168.75	**M1** **M1 A1 (3)**

Question number	Answer	Mark
2 (b)	Income = 15,000 x £9.12 = £136,800	**(2)**

Question number	Answer	Mark
2 (c)	**M1** Dividend = {(3 + 6.5)p x 15,000} + {2% x 15,000 x **M1** £4.50} = £1,425 + £1,350 = £2,775 Total profit = £136,800 + £2,775 - £72,168.75 - £80 = £67,326.25	**A1** **M1 A1 (5)**

Question number	Answer	Mark
2 (d)	Total profit percent per annum = $\frac{100\% \times £67,326.25}{5 \times £72,168.75} = 18.66\%$	**M1 A1** **(2)**

(Total for Question 2 = 12 marks)

Question number	Answer	Mark
3 (a)	Contribution per unit = £780 - £720 = £60 Profit on sales of 28,000 units = (28,000 - 20,000) x £60 = £480,000	**M1** **M1 A1** **(3)**

Question number	Answer	Mark
3 (b)	Contribution per unit = £249 - £210 = £39 Break even point = £1,170,000 / £39 = 30,000 units	**M1** **M1 A1** **(3)**

Question number	Answer	Mark
3 (c)	Contribution per unit = £1,099 - £925 = £174 Fixed costs per period = £174 x 22,250 = £3,871,500	**M1** **M1 A1** **(3)**

Question number	Answer	Mark
3 (d)	Contribution = £2,960,000 / £80,000 = £37 Variable costs per unit = £349 - £37 = £312	**M1** **M1 A1** **(3)**

(Total for Question 3 = 12 marks)

Question number	Answer	Mark
4 (a) (i)	Overheads = £4,033 + £12,101 + £42600 = £58,734 Net sales = £463,000 - £11,200 = £451,800 Ratio for overhead expenses = overheads x 100% = £58,734 x 100% net sales £451,800 = 13%	M1 M1 M1 A1 (4)

Question number	Answer	Mark
4 (a) (ii)	Net purchases = £329,600 - £12,050 = £317,550 Average credit taken = average creditors x 365 = £15,399 x 365 net purchases £317,550 = 17.7 days = 18 days	M1 M1 A1 (3)

Question number	Answer	Mark
4 (a) (iii)	Average credit given = average debtors x 365 = £23,750 x 365 net sales £451,800 = 19.2 days = 19 days	 M1 A1 (2)

Question number	Answer	Mark
4 (b)	Average credit given is the average length of time it takes for the retailer's creditors to pay the retailer, and is approximately 19 days.	 A1 A1 (2)

Question number	Answer	Mark
4 (c)	Cost of goods sold (COGS) = stock at start + net purchases - stock at end = £20,901 + £317,550 - £21,631 = £316,820 Average stock at cost price = ½ (stock at start + stock at end) = ½ (£20,901 + £21,631) = £21,266 Average time in stock = average stock = £21,266 x 365 days = 24.5 days COGS £316,820	 M1 M1 M1 A1 (4)

(Total for Question 4 = 12 marks)

Question number	Answer	Mark
5 (a)	Cost outstanding after 2 years = £720,000 - £120,000 - £250,000 = £350,000 As a proportion of year 3 inflow = £350,000 / £500,000 Payback period = 2.7 years = 2 years 8.4 months	**M1** **M1** **A1** **(3)**

Question number	Answer	Mark
5 (b)		

Cost	Cash flow £ (980,000)	Discount factor	Present Value £ (980,000)	
Year 1 cash inflow	(95,000)	0.870	(82,650)	**M1**
Year 2 cash inflow	400,000	0.756	302,400	**M1**
Year 3 cash inflow	800,000	0.658	526,400	**M1**
Year 4 cash inflow	400,000	0.572	228,800	
			(5,050)	**M1 A1**

(5)

Question number	Answer	Mark
5 (c)	Project Q has a negative net present value at a discount rate of 15%, and is not acceptable. Project P has the shorter payback period and a positive net present value at this rate. Project P is therefore recommended to proceed.	**A1** **A1** **A1** **(3)**

(Total for Question 5 = 11 marks)

Question number	Answer	Mark
6 (a) (i)	Owed to unsecured creditors = £85,790 - £11,110 = £74,680	**M1 A1 (2)**

Question number	Answer	Mark
6 (a) (ii)	Assets available for unsecured creditors = £52,184 - £11,110 = £41,074	**M1 A1 (2)**

Question number	Answer	Mark
6 (a) (iii)	Rate in the £ paid to unsecured creditors = £1 x £41,074 / £74.680 = 55p	**M1 A1 (2)**

Question number	Answer	Mark
6 (b) (i)	Owed to unsecured creditors = £23,310 / 0.6 = £38,850	**M1 A1 (2)**

Question number	Answer	Mark
6 (a) (ii)	Owed to secured creditors = £64,950 - £38,850 = £26,100	**M1 A1 (2)**

Question number	Answer	Mark
6 (a) (iii)	Total assets available for creditors = £23,310 + £26,100 = £49,410	**M1 A1 (2)**

(Total for Question 6 = 12 marks)

Question number	Answer	Mark
7 (a)	Total depreciation over five years = 1,060,000 – 20,000 = 1,040,000 % of cost to be written off each year = 1,040,000 x 100% = 24.5% 1,060,000 x 4	M1 M1 A1r (3)

Question number	Answer	Mark
7 (b)	Annual depreciation = 1,040,000 ¸ 4 = £260,000 Depreciation schedule (£)	M1

End of Year	Annual Depreciation	Accumulated Depreciation	Book Value
0	0	0	1,060,000
1	260,000	260,000	800,000
2	260,000	520,000	540,000
3	260,000	780,000	280,000
4	260,000	1,040,000	20,000
	M1	**M1**	**M1**

	M1 A1 (6)

Question number	Answer	Mark
7 (c)	Depreciation of Machine B from end year 1 to end year 6 = 800,000 – 20,000 = £780,000 Number of years from end year 1 to end year 6 = 5 Depreciation of Machine B per year = 780,000 / 5 = £156,000 Original cost of Machine B = 800,000 + 156,000 = £956,000	M1 M1 M1 M1 A1 (5)

(Total for Question 7 = 14 marks)

Question number	Answer	Mark
8 (a)	Price relative for year 2006 with year 2005 as base = 10.50 / 11.25 = 0.93	**M1 A1 (2)**

Question number	Answer	Mark
8 (b)	Index for year 2005 with year 2004 as base = 100 x 11.25 / 12.5 = 90 Index for year 2006 with year 2004 as base = 100 x 10.50 / 12.5 = 84 Index of prices: Year 2004 2005 2006 Index 100 90 84	**M1** **M1** **A1 (3)**

Question number	Answer	Mark
8 (c)	Index for year 2005 with year 2004 as base = 100 x 276,000 / 240,000 = 115 Index for year 2006 with year 2005 as base = 100 x 345,000 / 276,000 = 125 Index of sales: Year 2004 2005 2006 Index 100 115 125	**M1** **M1** **A1 (3)**

Question number	Answer	Mark
8 (d)	Relative income = 1.08 x (10.50 – 0.51) / 10.50 = 1.0275 Percentage increase = 100% x (1.0275 – 1) = 2.75%	**M1** **M1 A1r (3)**

(Total for Question 8 = 11 marks)