

Pearson LCCI

Certificate in Advanced Business Calculations (VRQ) Level 3

Sample assessment material for first teaching
from 2001
Time: 3 hours

Paper Reference

ASE3003

Complete the details below in block capitals.

Candidate name

Centre Code

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Candidate Number

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Candidate ID Number

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Total Marks

You do not need any other materials.

Instructions

- Use **black** ink or ball-point pen
– *pencil can only be used for graphs, charts, diagrams etc.*
- Fill in the boxes at the top of this page with your name, candidate number, centre code and your candidate ID number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- There are 8 questions in this question paper.
- The marks for **each** question are shown in brackets.
– *use this as a guide as to how much time to spend on each question.*
- You may use an English or bilingual dictionary.
- You must show all calculations, where applicable on the answer paper provided.
- You may use a calculator provided the calculator gives no printout, has no word display facilities, is silent and cordless. The provision of batteries and their condition is your responsibility.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question
- Check your answers if you have time at the end.

Turn over ►

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

- 1** Chu has a number of investments. Each one is for a whole number of years. Each one earns compound interest. He makes a table of his investments as follows, rounding figures to the nearest £. Insert your answer within the table.

(13)

	Investment A	Investment B	Investment C	Investment D
Sum invested	£150,000	£110,000	.....	.....
Rate of interest per annum	3%	3.5%	4.5%	4%
Time invested (years)	5	6	.....	6
Final amount (principle + interest)	£173,891	£105,925	£54,725
Interest earned	£23,891	£20,925

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(Total for Question 1 = 13 marks)



2 An investor bought 15,000 Ordinary Shares (nominal value £4.50) at 480 pence each. She paid a broker's commission of 0.25% of the nominal value.

(a) Calculate the total cost of the shares including commission. Give your answer in pounds.

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After five years, the shares are sold for 912 pence.

(b) Calculate the income from the sale, before commission.

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For the sale, the investor pays a flat-rate broker's commission of £80.

No dividend was paid for the first two years.

For the next two years, the dividends declared were:

Year 3	Year 4
3p per share	6.5p per share

For the fifth year the dividend amounted to 2% of the nominal value of the shares.

(c) Calculate the total profit made by the investor, including purchase, sale, dividends and commissions.

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(d) Express the total profit per annum as a percentage of the total cost of the shares.

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3 Four companies calculate their fixed costs per period of production, and their variable costs per unit of product during the period. Each company sets a selling price and calculates the number of units of product that must be manufactured and sold in order to break even.

They tabulate their results, as follows.

	Company A	Company B	Company C	Company D
Fixed costs per period	1,200,000	1,170,000	.....	2,960,000
Variable costs per unit of product	720	210	925	.....
Selling price	780	249	1,099	349
Number of units for break even	20,000	.....	22,250	80,000

Company A has fixed costs per period of £1,200,000, variable costs per unit of £720, and sets a selling price of £780. They calculate the number of units for break even as 20,000 units.

Calculate:

- (a) the profit made by company A on production and sales of 28,000 units per period (3)

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(b) the number of units for break-even for company B

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(c) the fixed costs per period of company C

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(d) the variable costs per unit of product of company D.

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4 The following information relates to a retailer's business for one year.

	£
Annual sales	463,000
Annual purchases	329,600
Sales returns	11,200
Purchases returns	12,050
Stock at start of year	20,901
Stock at end of year	21,631
Average money owed by debtors	23,750
Average money owed to creditors	15,399
Postage, telephone, internet	4,033
Heating, lighting	12,101
Rent	42,600

(a) Calculate the ratios for:

(i) overhead expenses to net sales

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(ii) average credit taken by the retailer, in days

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(iii) average credit given by the retailer, in days.

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(b) Give a brief interpretation of the average credit given by the retailer to his debtors.

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(c) Calculate the average number of days for which stock is held.

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5 A business owner has a choice of two investment projects. The estimated costs and returns are as follows.

	Project P	Project Q
	£	£
Cost	720,000	980,000
Year 1 cash inflow	120,000	(95,000)
Year 2 cash inflow	250,000	400,000
Year 3 cash inflow	500,000	800,000
Year 4 cash inflow	250,000	400,000

(a) For Project P calculate the payback period.

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The project chosen must earn a return of at least 15%.

(b) Using a discount factor of 15%, and the following table, calculate the net present value for Project Q.

Discounting factor	15%
Year 1	0.870
Year 2	0.756
Year 3	0.658
Year 4	0.572

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Using the same discount factor, the net present value for Project P is £45,400 (positive). The payback period for Project Q is approximately 2 years 10 months.

(c) Advise the business owner. Refer to your answers to both (a) and (b).

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6 (a) The following information relates to the bankruptcy of Company P.

Total assets available for creditors	£52,184
Total owed to secured creditors	£11,110
Total liabilities	£85,790

Calculate:

(i) how much is owed to unsecured creditors (2)

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(ii) the assets available for unsecured creditors (2)

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(iii) the rate in the pound paid to unsecured creditors. (2)

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(b) The following information relates to the bankruptcy of Company Q.

Total liabilities	£64,950
Assets available for unsecured creditors	£23,310
Rate in the pound paid to unsecured creditors	60p

Calculate:

(i) how much is owed to unsecured creditors (2)

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(ii) how much is owed to secured creditors (2)

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(iii) the total assets available for creditors. (2)

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7 A factory owner buys two machines. Machine A costs £1,060,000 and is estimated to have a life of 4 years and a scrap value of £20,000.

Using the equal instalment method:

(a) Calculate the percentage of the cost to be written off each year. Give your answer correct to 3 significant figures.

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(b) Prepare a depreciation schedule that shows:

- (i) the annual depreciation for each year
- (ii) the accumulated depreciation for each year
- (iii) the book value at the end of each year.

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Machine B is depreciated by the equal instalment method over 6 years. It has the same scrap value as machine A. It also has the same book value at the end of year one as machine A.

(c) Calculate the original cost of machine B.

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8 Company X sells Product A with the following prices and sales.

Year	2004	2005	2006
Price (£)	12.50	11.25	10.50
Sales	240,000	276,000	345,000

(a) Calculate the price relative for Product A for year 2006 with year 2005 as the base year.

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(b) Calculate the index of prices for Product A for the years 2004 to 2006 with year 2004 as the base year.

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(c) Calculate a chain base index for the sales of Product A for the figures shown.

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The quantity relative for Product A for year 2007 with year 2006 as the base year was 1.08, while the price decreased by £0.51 from year 2006 to year 2007.

- (d) Calculate the increase in total income from the sales of Product A in year 2007 as a percentage of the total income from sales of Product A in year 2006. Give your answer correct to 3 significant figures.

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(Total for Question 8 = 11 marks)

TOTAL FOR PAPER = 100 MARKS

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