

Level 2 Certificate in Business Calculations



International
Qualifications from EDI

Syllabus

Effective from 1st October 2001

INTRODUCTION

EDI is a leading international awarding body that was formed through the merger of the London Chamber of Commerce and Industry Examinations Board (LCCI) and GOAL a leading online assessment provider. EDI now delivers LCCI International Qualifications (LCCI IQ) through a network of over 5000 registered centres in more than 120 countries worldwide. Our range of business-related qualifications are trusted and valued by employers worldwide and recognised by universities and professional bodies.

Level 2 Certificate in Business Calculations

Aims

The aims of this syllabus are to enable candidates to develop:

- a broad knowledge and understanding of standard business calculations in relation to simple and compound interest, wages and commission, buying and selling, insurance, foreign currencies, hire purchase, partnerships and averages.
- the ability to apply this 'knowledge and understanding' in business situations.
- a knowledge and understanding of related terminology.

Target Audience and Candidate Progression

- This qualification is intended for students who have already passed the LCCI IQ Commercial Calculations Level 1 or equivalent.
- It is specifically designed to provide a suitable foundation for candidates wishing to progress to LCCI IQ Advanced Business Calculations Level 3.
- It also provides a suitable level of skill in business calculation for students wishing to continue in non-quantitative Level 3 LCCI IQ business courses, as well as for persons intending to perform standard calculations within a business environment and for the student with a general interest in the subject.

Level of English Required

Candidates should have a standard of English equivalent to LCCI IQ English for Business Level 1, together with a standard knowledge of mathematical English equivalent to that used in LCCI IQ Commercial Calculations Level 1.

Structure of the Qualification

The level 2 Certificate in Business Calculations is a single unit qualification that consists of the range of topics detailed below.

Syllabus topics

1. Simple and compound interest
2. The small business
3. Wages and commission
4. Buying and selling
5. Insurance
6. Foreign currencies
7. Hire purchase
8. Partnerships
9. Averages

Guided Learning Hours

EDI recommends that 140 - 160 Guided Learning Hours (GLHs) is a suitable course duration for an "average" candidate at this level. This figure includes direct contact hours as well as other time when candidates' work is being supervised by teachers. Ultimately, however, it is for training centres to determine the appropriate course duration based on their candidates' ability and level of existing knowledge. EDI experience indicates that the number of GLHs can vary significantly from one training centre to another.

ASSESSMENT

Assessment Objectives

After successfully completing this examination the candidate will be able to:

- Calculate simple and compound interest in standard business situations, and use the appropriate formulae
- Perform standard business calculations involving gross profit, net profit, overheads, shares and dividends, and simple job costing
- Perform standard business calculations involving gross wages, net wages, commission and salaries
- Perform standard business calculations involving orders, invoices, and statements of account
- Perform standard business calculations involving insurance, including premiums and claims
- Perform standard business calculations involving rates of exchange and conversions among currencies
- Perform standard business calculations involving hire purchase, including deposits, interest and installment payments
- Perform standard business calculations involving partnerships, including capital, interest on capital, partners' salaries, and division of profits
- Perform standard business calculations involving the arithmetic mean, including the mean of grouped data and simple weighted averages

- Use and understand appropriate mathematical and business terminology throughout Syllabus topics from LCCI IQ Commercial Calculations Level 1 are also examinable.

Coverage of Syllabus Topics in Examinations

Each examination will be broadly representative of the balance of topics in the detailed syllabus. Some flexibility is appropriate in order to provide a suitable variety of questions and business contexts, and to maintain an appropriate balance of difficulty.

Each examination will include topics from most or all sections of the syllabus. A single question may relate to a single section of the syllabus, or to more than one section.

Examination format

- Candidates will be examined in a single written examination lasting 2½ hours.
- Questions will normally be set within a straightforward business context.
- Candidates will be required to answer all 8 questions.

Answer Format

Marks are awarded for correct working as well as for correct answers and for an appropriate level of accuracy.

Where a correct answer is seen, without working, a candidate will normally be given full marks for that section. However, where a question asks for a specific method, then that method must be used and shown, otherwise the candidate will normally receive no marks for that section. Candidates are advised that it is normally to their advantage to show all working.

Candidates who make an error at an early stage in a question will be given credit for later work if it involves a correct method, appropriate to the question.

Mark Allocation

Questions will not necessarily carry equal marks. Questions of different difficulty or different length will normally carry different marks.

Marks will be awarded for the appropriateness of the method used as well as the accuracy of the answer.

Marks will not normally be reserved for appropriate use of English, correct use of grammar, for a specific format of answer, or for presentation, except where specifically stated in the question (such as asking for the answer in a particular format). Candidates should, however, be aware of the need for clear, intelligible and unambiguous answers. An answer must be comprehensible in order to gain marks.

Certification

Successful candidates will be awarded the level 2 Certificate in Business Calculations based on the achievement of the percentages and grades below.

Pass	50%
Merit	60%
Distinction	75%

Recommended Reading List and Support Material

Reading List

Title	Author	Publisher	ISBN Code
Success in Business Calculations (2nd edition)	G Whitehead	John Murray	0719 53989 7

Support Material

Model answers and past question papers as well as Annual Qualification Reviews (AQR's) are available from the LCCI website, www.lcci.org.uk

How To Offer This Qualification

To offer this qualification you must be an LCCI IQ registered examination centre. To gain centre approval please contact Customer Support on 08700 818008 between the hours of 0830 and 1700 (GMT) Monday to Friday or by email on centresupport@ediplc.com. Alternatively you may contact your Regional LCCI Office or Co-ordinating Authority.

Syllabus Topic

Items Covered

1 Simple and compound interest

Candidates must be able to:

1.1 Terminology

1.1.1 Understand the terms: principal, rate of interest, time period, loan, overdraft, investor, borrower

1.2 Simple interest

1.2.1 Calculate the amount of simple interest on a sum borrowed or deposited for (a) a single year (b) a number of years

1.2.2 To calculate simple interest, use the formula:

$$\text{Interest} = \frac{\text{Principal} \times \text{Rate (per cent)} \times \text{Number of years}}{100}$$

$$I = \frac{PRN}{100}$$

1.2.3 Use a rearranged formula to calculate:

(a) rate of interest:

$$R = \frac{100I}{PN}$$

(b) principal borrowed or deposited:

$$P = \frac{100I}{RN}$$

(c) the number of years for which the principal was borrowed or deposited:

$$N = \frac{100I}{PR}$$

1.3 Compound interest

1.3.1 Calculate the amount of compound interest on a sum borrowed or deposited for a single year

1.3.2 Calculate the amount of compound interest on a sum borrowed or deposited for a whole number of years, calculating year on year

1.3.3 Calculate the amount of compound interest on a sum borrowed or deposited for a whole number of years, using the formula:

Amount = Principal

$$\left(1 + \frac{\text{Rate of interest}}{100}\right)^{\text{Number of years}}$$

$$A = P \left(1 + \frac{R}{100}\right)^N$$

1.3.4 Use the compound interest formula to calculate:

- (a) appreciation in value of property over a whole number of years
- (b) an increase in a sum deposited in an interest bearing account over a whole number of years
- (c) an increase in a sum borrowed over a whole number of years
- (d) an increase in the value of an investment over a whole number of years

1.3.5 Compare amounts of compound interest and simple interest on a sum borrowed or deposited

1.3.6 Compare an appreciation in value of property at compound interest with the cost of a loan at simple interest to purchase the property

2 The small business

2.1 Terminology

2.2 Gross profit

2.3 Net profit

Candidates must be able to:

2.1.1 Understand the terms: cost price, selling price, sales (turnover), trade discount, overheads, gross profit, net profit, shares, dividends, profit margin

2.2.1 Calculate gross profit

2.2.2 Calculate gross profit as a percentage of turnover

2.2.3 Calculate selling price based on a stated gross profit percentage

2.3.1 Calculate the total of overhead expenses

2.3.2 Calculate net profit

2.3.3 Calculate net profit as a percentage of turnover

2.4 Overheads

- 2.4.1 Calculate the following per month, per quarter or per annum:
- (a) electricity and gas charges including an annual fixed charge, a charge per unit and a charge for rent of an appliance
 - (b) telephone charges including a charge per unit used and a rental charge for a telephone
 - (c) motor vehicle running costs including road tax, insurance, servicing and fuel. Calculate the average (mean) cost per kilometre

2.5 Simple job costing

- 2.5.1 Calculate the various costs of a job:
- (a) materials and components
 - (b) labour
 - (c) services eg machining, packaging, transport
 - (d) overhead costs
- 2.5.2 Calculate the total costs of a job
- 2.5.3 Calculate the supplier's profit as a percentage of total costs
- 2.5.4 Calculate the total charge made by the supplier

2.6 Shares and dividends

- 2.6.1 Calculate the sum raised by the issue of a given number of shares at a given price per share
- 2.6.2 Calculate the number of shares to be issued at a given price per share to raise a given sum
- 2.6.3 Calculate the price per share required for a given number of shares to raise a given sum

3 Wages and commission

3.1 Terminology

3.2 Gross wages

3.3 Commission

3.4 Net wages

Candidates must be able to:

- 3.1.1 Understand the terms: wages, salaries, gross pay, net pay, deductions, basic rate, overtime rate, piece rate, commission, bonus
- 3.2.1 Calculate the number of hours worked in a week
- 3.2.2 Calculate overtime payments eg time and a quarter, time and a half, double time
- 3.2.3 Calculate basic rate pay
- 3.2.4 Calculate overtime pay
- 3.2.5 Calculate gross pay for a week based on the time worked
- 3.2.6 Calculate gross pay based on payment per unit of output produced (piecework)
- 3.3.1 Calculate commission payments including:
 - (a) straight commission eg a simple percentage rate of the value of sales made
 - (b) graduated commission eg 10% on the first £10,000 of sales, 5% on the next £5,000 and 2.5% on the remainder
 - (c) quantity commission eg £5 per article sold
- 3.3.2 Calculate the value of sales made from a stated amount of commission
- 3.3.3 Calculate gross pay per week or per month based upon a wage or salary plus commission
- 3.4.1 Calculate the total of deductions from gross wages eg income tax, trade union contributions, pension contributions (as a percentage of gross wages)
- 3.4.2 Calculate net pay using the total of deductions from gross pay

- 3.4.3 Calculate the ratio of net pay to gross pay
- 3.5 Salaries**
 - 3.5.1 Calculate an employee's annual salary
 - 3.5.2 Calculate an employer's annual salary bill
- 4 Buying and selling**
 - 4.1 Terminology**
 - 4.1.1 Understand:
 - (a) the terms retail and wholesale
 - (b) the purpose of an order, invoice, statement of account
 - (c) the meaning of list price, trade discount, cash discount, mark up
 - 4.2 Order**
 - 4.2.1 Calculate the value of an order (quantity x unit cost)
 - 4.2.2 Calculate an order quantity from the supplier's daily output and time required to complete the order
 - 4.2.3 Calculate returns to a supplier as a percentage of the quantity ordered
 - 4.3 Invoice**
 - 4.3.1 Calculate the total list price of items on an invoice
 - 4.3.2 Calculate trade discount as a percentage of list price
 - 4.3.3 Deduct trade discount from list price
 - 4.3.4 Calculate the additional charges such as transport, import duty
 - 4.3.5 Calculate the invoice total
 - 4.4 Statement of account**
 - 4.4.1 Complete a statement by calculating the balances.
 - 4.4.2 Calculate the final balance
 - 4.4.3 Calculate the amount of cash discount for prompt payment
 - 4.4.4 Calculate the payment made after deduction of cash discount

5 Insurance

Candidates must be able to:

5.1 Terminology

5.1.1 Understand the terms: premium, policy, no claims bonus, claim, principle of indemnity, under-insurance, vehicle insurance, buildings insurance and contents insurance

5.2 Premiums

5.2.1 Calculate a premium for vehicle insurance per month or per annum

5.2.2 Calculate a premium for buildings insurance per month or per annum

5.2.3 Calculate a premium for contents insurance per month or per annum

5.2.4 Calculate the total premium paid for buildings and contents insurance per month or per annum

5.2.5 Calculate a no claims bonus as a percentage of the annual premium for vehicle insurance

5.2.6 Calculate the net premium for vehicle insurance after deduction of a no claims bonus

5.2.7 Calculate a gross premium for vehicle insurance from a stated net premium and a percentage no claims bonus

5.2.8 Calculate a service charge as a percentage of an annual premium

5.2.9 Calculate a monthly premium after taking account of a service charge

5.3 Claims

5.3.1 Calculate compensation payable when a claim is made on an insurance policy

5.3.2 Calculate compensation payable on a claim when property or vehicles are not insured for full value

5.3.3 Calculate the full value of property or vehicles which are underinsured

5.3.4 Calculate the annual premium required to insure at full value

6 Foreign currencies

Candidates must be able to:

6.1 Terminology

6.1.1 Understand the terms: currency, rates of exchange, traveller's cheques

6.2 Rates of exchange

6.2.1 Convert one currency into another currency at a stated rate of exchange

6.2.2 Calculate the commission charged by agencies for changing currencies

6.2.3 Calculate the net amount received after deducting an agency's commission

6.2.4 Calculate the amount of currency after conversion at different rates of exchange

6.3 Conversions

6.3.1 Conversions may include export sales, import orders, foreign travel, foreign holidays, price comparisons in different countries

7 Hire purchase

Candidates must be able to:

7.1 Terminology

7.1.1 Understand the terms: cash price, hire purchase terms, deposit, instalment payments, interest charge, balance owing

7.2 Deposits

7.2.1 Calculate the amount of deposit as a percentage of the cash price

7.2.2 Calculate the amount of balance owing

7.3 Interest

7.3.1 Calculate the amount of simple interest charged on the balance owing

7.3.2 Calculate the total amount to be repaid (balance owing plus interest charges)

7.4 Instalment payments

7.4.1 Calculate the number of instalments to be paid over a stated period

7.4.2 Calculate the amount of each instalment per month or per week

7.5 Hire purchase terms

7.5.1 Calculate different sets of hire purchase terms for comparison

7.5.2 (a) Compare the different sets of hire purchase terms
(b) State with reasons the best hire purchase option for a customer

be

8 Partnerships

Candidates must be able to:

8.1 Terminology

8.1.1 Understand the terms: partners' capital accounts, interest on capital, partner's salary, net profit, division of profit

8.2 Capital

8.2.1 Calculate additions to or withdrawals from capital

8.3 Interest on capital

8.3.1 Calculate interest on partners' capitals

8.3.2 Calculate profit available for distribution after deducting interest payments

8.4 Partner's salary

8.4.1 Calculate a partner's salary paid as a percentage of net profit

8.4.2 Calculate profit available for distribution after deducting salary payment

8.5 Division of profits

8.5.1 Calculate the division of profit between partners:

(a) in equal amounts

(b) in proportion to capital invested

8.5.2 Calculate the total annual income received by a partner from the business e.g. interest on capital plus salary plus share of profit

9 Averages

Candidates must be able to:

9.1 Terminology

9.1.1 Understand the terms: simple average as an arithmetic mean, weighted average, frequency

9.2 Simple averages

9.2.1 Calculate the sum of a set of quantities

9.2.2 Calculate the total number of quantities

9.2.3 Calculate a simple average by dividing the total sum of the quantities by the number of quantities (quantities may include sizes, ages, scores etc)

9.3 Weighted averages

- 9.3.1 In a set of quantities, identify those that are repeated several times
- 9.3.2 Give due weight to the frequency of these repeated quantities
- 9.3.3 Calculate a weighted average by dividing the total sum of weighted quantities by the number of quantities involved
- 9.3.4 Construct and use a simple grouped frequency table

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and performance

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