SOCIETY OF INTERNATIONAL ACCOUNTING TECHNICIANS

Foundation Level

Paper 1
Commercial Calculations

Extended Syllabus

INTRODUCTION

Extended Syllabuses are part of a comprehensive package of support materials offered by the SIAT. This package includes past question papers, Model Answers and a range of How to Pass books, all of which are designed to offer help and guidance to teachers and candidates, and to enhance chances of success in SIAT examinations.

What are they?

Extended Syllabuses specify in detail the learning and assessment requirements of SIAT examinations.

Each one, produced by the subject Chief Examiner, will state in detail the following:

- Aims and assessment objectives of the examination
- Level of English required
- Syllabus topics and syllabus coverage in examinations
- Examination format
- Guided learning hours
- Candidate answer guidance
- Pass mark information and mark allocation
- Recommended reading list and support material
- Detailed listing of syllabus topics and syllabus elements

Who are they for and how can they be of use?

They are designed for:

- Teachers who will find them invaluable when designing courses and planning lessons

- Candidates who will find them essential because they can be used as checklists when preparing for examinations. Candidates will also be able to refer to Extended Syllabuses when planning revision programmes.

Paper 1 Commercial Calculations

Aims

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

- an ability to understand and work accurately with the basic processes of arithmetic

- an ability to apply the basic processes of arithmetic to solve problems encountered in domestic and business life

Assessment Objectives

After successfully completing this examination candidates will be able to:

- perform simple arithmetic calculations accurately

- apply the appropriate arithmetic process to solve basic domestic and commercial problems

Level of English Required

Candidates should have a standard of business English equivalent to LCCIEB English for Business, Level 1 plus a basic knowledge of mathematical terms

Syllabus Topics

1. Whole numbers
2. Fractional parts
3. Measures: money; weight (mass); length; capacity; time
4. Percentages
5. Approximation
6. Proportion and variation
7. Arithmetic mean (average)
8. Spatial concepts
9. Charts and graphs
10. Applications

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

The time allowance for the examination is 2 hours. There will be a total of 8 questions, all of which will be compulsory.

Guided Learning Hours

SIAT recommends that 140-160 Guided Learning Hours (GLHs) provide 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 the responsibility of training centres to determine the appropriate course duration based on their candidates’ ability and level of existing knowledge. SIAT experience indicates that the number of GLHs can vary significantly from one training centre to another.

Candidate Answer Guidance

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.

Candidate Performance Measurement

Pass Mark Information

Pass 50%
Credit 60%
Distinction 75%

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 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.

Recommended Reading List and Support Material

Title	Author	Publisher	ISBN Code
Success in Business Calculations	G Whitehead	John Murray	0719 53989 7

Support Material

Model Answers and past question papers can be purchased from the SIAT Customer Service Team.

Syllabus

1 Whole numbers

Candidates must be able to:

1.1 Recognise and read numbers of any magnitude whether written in words or in figures

1.2 Perform the 4 rules of arithmetic – addition, subtraction, multiplication and division – with whole numbers using pen and paper and/or calculator methods

1.3 Identify odd, even, prime and square numbers

1.4 Continue given simple number sequences

1.5 Recognise and use directed (negative) numbers in practical situations – temperature change, debit balances, height above and below sea level etc

1.6 Know and understand the terms factor and multiple and their inter-relationship

1.7 Find, without reference to calculators or tables, the square root of square numbers between 1 and 400

2 Fractional parts

Candidates must be able to:

2.1 Recognise vulgar fractions and understand, for example, that" means a whole broken into 5 equal parts and 2 of those parts used

2.2 Calculate a fractional part of a number or quantity

2.3 Write a number or quantity as a fraction of a number or a quantity

2.4 Apply the 4 rules of arithmetic to fractions

2.5 Understand and use the decimal system for writing fractional parts, recognising and identifying the relative size of a figure within a number by its place value

2.6 Perform the 4 rules of arithmetic with decimals – by pen and paper and/or calculator methods

2.7 Recognise the equivalence of vulgar fractions and decimal fractions and be able to convert between the two

3 Measures

Candidates must be able to:

3.1 Money

3.1.1 Perform calculations using £ sterling and other international currencies

3.1.2 Convert between currencies, given a conversion rate

3.2 Weight (mass)

3.2.1 Recognise the metric measures of weight: mg, g, kg, tonne, and their relationships one with another

3.2.2 Convert between these measures

3.2.3 Recognise the common Imperial measures of weight: lb, ton

3.2.4 Convert between metric and Imperial units of weight, given the conversion factor

3.2.5 Perform calculations using the measures of weight

3.3 Length

3.3.1 Recognise the metric measures of length: mm, cm, m, km and the relationships between them

3.3.2 Convert between these measures

3.3.3 Recognise the common Imperial measures of length: inches, feet, yards, miles

3.3.4 Convert between metric and Imperial units of length, given the conversion factor

3.3.5 Perform calculations using the measures of length

3.4 Capacity

3.4.1 Recognise the metric measures of capacity: millilitre, litre, cubic centimeter and cubic metre and the relationships between them

3.4.2 Convert between these measures

3.4.3 Recognise the common Imperial measure of capacity: gallon

3.4.4 Convert between metric and Imperial units of capacity, given the conversion factor

3.4.5 Perform calculations using the measures of capacity

3.5 Time

3.5.1 Recognise the measures of time: second, minute, hour, day, week, month, year and the relationships between them

3.5.2 Convert between these measures

3.5.3 Perform calculations using the measures of time

3.5.4 Understand and use the 12 hour clock and 24 hour clock

4 Percentages

Candidates must be able to:

4.1 Understand that a percentage is a fraction whose denominator is always 100

4.2 Convert between vulgar fractions, decimal fractions and percentages

4.3 Calculate a percentage of a number or quantity

4.4 Write one quantity as a percentage of another

4.5 Apply percentage calculations to the common domestic and commercial situations in which they are used including deposits, percentage increase and decrease, simple interest, commission payments, simple commercial statistics

5 Approximation

Candidates must be able to:

5.1 Write whole numbers correct to the nearest ten, hundred, thousand, etc

5.2 Write fractional parts and decimal parts to the nearest whole

5.3 Write decimal parts to a given decimal place

5.4 Write whole numbers and decimal parts to given significant figures

5.5 Write amounts of money and measures to any given degree of accuracy

5.6 Write a calculator display of the answer to a problem to a reasonable degree of accuracy

6 Proportion and variation

Candidates must be able to:

6.1 Understand and use the idea of ratio

6.2 Find the ratio between 2 quantities

6.3 Given the ratio between 2 or more quantities making up a whole and the amount of the whole, find the amount of each separate quantity in the whole

6.4 Given the ratio between 2 (or more) quantities making up a whole and the amount of one of the quantities, find the amounts of the other quantities and the amount of the whole

6.5 Understand and use simple scales

6.6 Find the real dimensions of an object from a given scale drawing

6.7 Understand and use simple map scales of the form 1:25,000 for example

7 Arithmetic mean (average)

Candidates must be able to:

7.1 Calculate the mean from discrete or continuous raw data

7.2 Calculate the mean from a frequency table of discrete data

7.3 Calculate the total of the sample knowing the mean and the number in the sample

7.4 Calculate the number in the sample knowing the mean and the total in the sample

8 Spatial concepts

Candidates must be able to:

8.1 Recognise and name the right angle triangle

8.2 Recognise and name quadrilaterals: rectangle, square

8.3 Recognise and name: rectangular solid, cube

8.4 Recognise and name circle features: circumference, radius, diameter

8.5 Calculate the areas of plane shapes: right angle triangle, rectangle, square, circle

8.6 Calculate the perimeter of plane shapes: right angle triangle, rectangle, square, circle

8.7 Calculate the perimeter and area of plane shapes made from: right angle triangle, rectangle, square, circle

8.8 Calculate the volume of rectangular solid and cube

8.9 Recognise and use units of perimeter: linear units

8.10 Recognise and use units of area: square units

8.11 Recognise and use units of volume: cubic units

9 Charts and graphs

Candidates must be able to:

9.1 Read and interpret tables of information concerning, for example, railway or bus timetables, insurance premium tables, holiday brochures, building society publications

9.2 Read and interpret graphs, bar charts, pie charts, conversion graphs

9.3 Construct, from given data, line graphs, bar charts, pie charts, conversion graphs

9.4 Read and interpret frequency diagrams for discrete and continuous data

10 Applications

Candidates must be able to:

10.1 Use knowledge of syllabus sections 1-9 to solve problems of a practical nature concerning domestic and commercial situations. These will include wages and salaries, business profit and loss, personal and household finance, costing problems, calculating time intervals in 12 hour and 24 hour clock times, common measures of rate such as average speed, cost per unit, density etc, spatial problems in 2 and 3 dimensions.