

## Level 3 Certificate in Advanced Business Calculations



International  
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Annual Qualification Review

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## INTRODUCTION

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The annual qualification review provides qualification–specific support and guidance to centres. This information is designed to help teachers preparing to teach the subject and to help candidates preparing to take the examination.

The reviews are published in September and take into account candidate performance, demonstrated in both on demand and series examinations, over the preceding 12 months. Global pass rates are published so you can measure the performance of your centre against these.

The review identifies candidate strengths and weaknesses by syllabus topic area and provides examples of good and poorer candidate responses. It should therefore be read in conjunction with details of the structure and learning objectives contained within the syllabus for this qualification found on the website.

The review also identifies any actual or proposed changes to the syllabus or question types together with their implications.

## PASS RATE STATISTICS

The following statistics are based on the performance of candidates who took this qualification between 1 October 2008 and 30 September 2009.

Global pass rate            79.98%

Grade distributions

Pass                            13.08%

Credit                         24.18%

Distinction                 42.72%

## GENERAL STRENGTHS AND WEAKNESSES

### Strengths

- clear layout of answers
- good level of overall numeracy
- good understanding of basic business calculations
- many candidates have an excellent grasp of a wide range of business calculations, and as a consequence distinctions are common.

### Weaknesses

- transferring question numbers to the front of the answer booklet in the order they have been answered
- providing answers to a required or appropriate level of accuracy
- providing a restatement of a numerical answer when an explanation and/or interpretation is required
- a relatively small number of candidates enter the examination hall with a poor grasp of the subject, and their marks reflect this.

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## TEACHING POINTS BY SYLLABUS TOPIC

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### Syllabus Topic 1: Simple and compound interest

Questions on this topic are generally well answered. Candidates occasionally use simple interest when compound interest is asked for, and less frequently use compound interest when simple interest is asked for. Candidates often appear unfamiliar with the products method. Questions are intended to test a specific method or methods, and using a method other than the one specified in that part of the question will inevitably lose marks.

Candidates should understand that interest is normally paid or received to the nearest penny, cent or sen, and that giving answers to an inappropriate degree of accuracy is inaccurate and may be penalised.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method of interest required by the question
- be able to use trial and improvement or logarithms or other method to calculate the duration of a compound interest loan
- perform all calculations accurately
- be familiar with the difference between principle, interest, and amount (principle plus interest), and make this clear in the answer
- when using compound interest, be able to calculate using the year on year method and also using the formula, and use the appropriate method when specified
- understand and apply the requirement to give answers 'to the nearest penny' (or pound, ringgit, sen, dollar or cent), to a given number of significant figures or decimal places
- where no requirement for a particular level of accuracy is stated, understand the need to give answers to a suitable degree of accuracy. If in doubt, this should be to two decimal places of a pound, dollar or ringgit.

### Syllabus Topic 2: Stock exchanges

Questions on this topic are generally well answered. Candidates are generally familiar with all topics, though sometimes with not all aspects of a calculation.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- understand nominal value for stock and its use in calculations of interest
- understand nominal value for shares and its use in calculations of interest
- understand the different methods of calculating interest for ordinary shares
- understand commission, both as a percentage and a flat rate.
- understand that when a rounded figure is used in a calculation then the answer will only have a limited accuracy, and be able to interpret this correctly

### **Syllabus Topic 3: Business ownership**

Questions on this topic are often well answered. Candidates are generally familiar with the basic concepts of all topics, but some have difficulty in applying these beyond the more straightforward calculations.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method appropriate to the question
- be able to handle different requirements in different questions and different methods required in the same question
- understand contribution per unit, and be able to use it appropriately
- be able to apply standard calculations in a range of situations
- understand the difference between stating and explaining an answer, when required.

### **Syllabus Topic 4: Profitability and liquidity**

Questions on this topic are generally well answered. Candidates are generally familiar with the required calculations of profitability and liquidity.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- be familiar with information presented in the form of a balance sheet, or cut down balance sheet
- be able to apply standard calculations in a range of situations
- understand the significance of net purchases and net sales, and where appropriate use these in preference to gross figures
- be aware of guideline figures for acid test ratio and current ratio, and be able to explain both what these figures mean in general and what specific figures mean for the healthy liquidity of a normal company
- understand the difference between the rate of stockturn per annum and the average number of days items are held in stock, and provide the answer in the form required.

## **Syllabus Topic 5: Investment appraisal**

Questions on this topic are often well answered. Candidates are generally familiar with the basic concepts of all topics, though some candidates appear unfamiliar with calculations for net present value and internal rate of return, in particular.

The four methods of investment appraisal are all quite different in nature, and so teaching points are provided for each, as well as more generally.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method appropriate to the question
- be able to apply standard calculations in a range of situations
- when calculating payback period, understand the difference between a decimal of a year and a number of months
- understand that, since there are a variety of methods in use for accounting rate of return, a particular calculation of accounting rate of return would be required by a particular employer, and so a specific calculation of 'average rate of return' is required by this syllabus.
- understand that project cost is a negative figure in net present value
- understand the relationship between percentage discount rate and the discount factor for a particular year, and be able to perform calculations based on this
- treat negative net present values with appropriate care in calculations of internal rate of return
- understand that the standard calculation of internal rate or return is based on straight line interpolation, and that this is not perfectly accurate
- understand that interpolation is more accurate than extrapolation
- understand the difference between stating and explaining an answer, when required.

## **Syllabus Topic 6: Bankruptcy**

Questions on this topic are often very well answered. Candidates are generally familiar with the difference between secured and unsecured creditors. Candidates are generally familiar with the required calculations of rate in the pound, ringgit or dollar paid to unsecured creditors, and amount paid to creditors.

Bankruptcy involves actual payments, and so answers should normally be given to the nearest penny, sen or cent.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method appropriate to the question
- be able to apply standard calculations in a range of situations
- understand the difference between assets and liabilities, and be able to identify whether a particular item is an asset or liability
- make sure that the money owed and paid to secured creditors is not included in calculations of rate payable to unsecured creditors
- understand that although rate payable can usefully be expressed as a percentage, it is normally required to be stated in the appropriate currency
- understand that the rate payable cannot be negative or greater than one, and use this to check and correct answers
- understand the difference between the amount owed to a creditor and the amount paid, and in particular that the amount paid to a creditor will not be greater than the amount owed to that creditor.

## **Syllabus Topic 7: Depreciation of Business Assets**

Questions on this topic are often well answered. Candidates occasionally use the equal instalment method when the diminishing balance method is asked for, and even more rarely use the diminishing balance method when the equal instalment method is asked for.

Depreciation involves estimation, and therefore the appropriate level of accuracy for rounded answers for this topic is less than other questions. Candidates are still expected to use an appropriate level of accuracy. Candidates should be aware that omitting decimals of a pound, dollar or ringgit will not be penalised.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method appropriate to the question
- be able to apply standard calculations in a range of situations
- take care to provide all required elements when a table is asked for
- remember that depreciation does occur in year 1
- when using the equal instalment method, be able to calculate the amount of depreciation per annum from figures supplied, including when these are the initial cost and scrap value, and when they are in an incomplete table
- when using the diminishing balance method, be able to calculate the percentage depreciation per annum from figures supplied, including when these are the initial cost and scrap value, and when they are in an incomplete table
- understand that the diminishing balance method will never produce a net book value that is negative, but that the equal instalment method may do so, but that negative values are inappropriate.

## **Syllabus Topic 8: Index numbers**

Questions on this topic are often well answered. Some candidates are inclined to offer a relative when an index is asked for, and vice versa, or to offer these in the form of a percentage. Not all candidates are able to handle all topics with equal reliability.

The teaching points for the candidates are:

- be familiar with all methods required by the syllabus
- identify the method appropriate to the question
- be able to apply standard calculations in a range of situations
- take care to provide answers in the form required
- provide answers to an appropriate degree of accuracy. For index numbers, for example, this will generally be the same level of detail as the index figures supplied
- understand the difference between stating and explaining an answer, when required
- understand in particular that an index number or relative provides a clear statement of a percentage increase or decrease in the particular real value that is used in calculating the index, and be able to do calculations based on this
- be able to state clearly the base and current dates to which an index, relative, or percentage change relates
- be able to state clearly the name of the quantity that has changed.

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## FURTHER GUIDANCE

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### General

Candidates should read each question carefully and pay attention to key words and phrases. Candidates should be familiar with all methods required in the syllabus. In particular candidates should identify the appropriate method and not offer an alternative method where a specific one is required.

Accuracy is important in business calculations, and this applies equally to:

- reading the question
- carrying out the calculation
- laying out the answer
- stating the answer.

Candidates should take care to provide workings and not just numerical answers.

In all syllabus topics, candidates should be able to demonstrate understanding of their answer, and occasionally this is tested by questions that ask for an explanation of a particular answer or value. Candidates should be aware that when an explanation or interpretation is requested, a restatement of a previous numerical answer in words will generally receive no credit.

Candidates should:

- be aware of the difference between a restatement of an answer and an explanation
- provide an explanation or interpretation as if to a client
- be aware that the client, while understanding the principles of business, may not have received training in accountancy or business calculations
- provide explanations and interpretations that are comprehensible to such a client
- provide explanations and interpretations that are clear, succinct, and cover all important points
- provide advice if appropriate or required.

An explanation may require a comparison between two or more figures, for example by stating which of two or more options

- earns the higher interest, or equivalent financial gain
- is the more profitable method of production
- is expected to be the better investment
- is the more likely to be accurate.

An explanation may require a comparison between a calculated figure and a requirement or guideline, for example:

- comparing a calculated acid test ratio or current ratio with a guideline figure
- comparing a calculated internal rate of return with a required rate of return
- interpreting a figure for net present value as a comparison between the estimated outflow and inflow and a required rate of return.

Required answers may not be limited to these considerations.

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## EXAMPLES OF CANDIDATE RESPONSES

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### Candidate Responses

Answers to questions in Advanced Business Calculations are generally either right or wrong, and overall grades of fail, pass, credit and distinction are based on the proportion of correct answers provided. Correct methods of calculation are widely available, including in the How to Pass book for this syllabus.

As is common in calculation-based papers, full marks are often earned on individual questions and occasionally earned on the paper as a whole.

Generally, there is only one correct final answer to a question or section, and the Model Answers produced for earlier papers provide many clear examples of this. The Exemplar papers now produced also provide this information. There may be more than one method of arriving at a correct answer, and unless a specific method is stated in the question as required then all are credited equally. Where a final answer is wrong, then correct methods or part methods will still earn partial credit.

In a small number of cases, a topic may have more than one answer that is considered correct in business, and then generally each is credited. Generally, questions requiring a calculation of borrowing ratio have an alternative answer that is also marked as correct, and is also given in the Model Answers and Exemplar paper answers. In calculations of average rate of return a particular method of calculation is specified in the syllabus to avoid any lack of clarity in the more common term 'accounting rate of return'.

Question sections requiring written answers are included to test whether a calculation has been understood or merely remembered. The general requirements for written answers are stated immediately above, and further specific guidance is included in earlier sections.

For candidates with good English, written answers are often good discriminators between fail, pass, credit and distinction. However, these are only a small proportion of the overall marks, and it is common for a candidate with poor English but a good grasp of all calculation topics to earn a distinction grade, even when they ignore written answer sections entirely. Candidates should be reminded that this is not a syllabus where the use of good English in written answers is a requirement, and so examiners will award good marks to written answers where the English is poor but the explanation is nevertheless clear and fulfils the requirements.

There is, however, a pressing need for many candidates to be better schooled in important terminology. An inability to distinguish correctly between terms such as 'increase' and 'decrease', 'simple' and 'compound' interest, and others would be a problem in a business situation, and also in this examination.

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and performance

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