This article considers the benefits of computer-based exams (CBEs), highlights the points that you need to be aware of when completing ACCA's current CBEs, and looks at the different types of questions featured in these exams. It relates specifically to the new syllabus exams, which will be available from December 2011.

**COMPUTER-BASED EXAMS AT ACCA**

ACCA has offered CBEs since 1998. The launch of the Foundations in Accountancy suite of awards sees an increased number of papers being assessed via CBE and provides the next step in the move towards ACCA's vision to deliver all exams via e-assessment. The papers shown in Table 1 will be assessed by CBE from December 2011.

A rigorous approach is taken when developing CBEs. Questions are written by experienced writers. They are then thoroughly reviewed by examiners, staff in the qualifications team at ACCA and other technical experts at various points during their development. Questions are trialled in exam conditions to gather statistical data on how they work and, if necessary, questions are revised in light of this data. It is only when a question has successfully completed all of these stages that it is ready to be included in an actual exam.

**COMPUTER BASED V PAPER BASED?**

CBEs offer specific benefits over paper-based exams. A particular benefit of the current CBEs is that they can be automatically marked by computer, which means that you can receive your results soon after completing the exam.

It is also possible for you to complete these CBEs at any time of year rather than being restricted to the June or December exam sessions. Exams are automatically constructed from a large bank of questions, which means that a group of students taking the same exam in the same place and at the same time will be presented with different questions, in different orders. Questions are specifically written for the CBE question banks. The CBE system ensures that each exam contains questions drawn from areas across the syllabus, but there is no way of predicting the actual questions which will be included in an exam.

**Equivalent exams are currently available in paper-based format. However, completing a CBE is a very different experience to completing an exam on paper. The types of questions included in each format will be similar, but the way that each question is presented, and the answer recorded, differs between the two. In a CBE, candidates record their answers on the same screen where the question is shown; for paper-based multiple-choice exams answers are recorded on a separate Candidate Registration Sheet (CRS). Also, the whole experience of moving between questions and progressing through the exam is quite different. In a paper-based exam, you can see several questions at a time, whereas in a CBE students are presented with one question at a time to help them to focus on each question in turn. Another difference is in the way we read information presented in different formats; because of our experience online our eyes tend to jump around the computer screen rather than read it systematically as we would a printed page. For CBEs, therefore, remember to take time to read the question carefully to ensure you don’t miss any important information.**

These differences mean that it is important for you to take time to familiarise yourself with the experience of completing exams as CBEs. Go to www.accaglobal.com/students/exams/cbes/demo to access materials which will help to familiarise you with the CBE system. By practising exam technique using computer-based practice tests, you will be able to concentrate on answering the questions, rather than understanding the system, when you eventually take a real CBE.

**USING THE CBE SYSTEM**

Actions associated with paper-based exams, such as turning a page, need to be recreated in different ways in a CBE. This is achieved by reserving part of the screen for tools which enable movement between questions and which also to help you monitor your progress through the exam, as can be seen in Figure 1, an example of a CBE question from a Paper FMA exam. The real exams include additional features, such as a timer to show how much time is remaining and a drop down list of questions showing the questions not yet answered.

### Table 1: COMPUTER-BASED EXAMS

<table>
<thead>
<tr>
<th>ACCA QUALIFICATION</th>
<th>Knowledge module</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Accountant in Business</td>
</tr>
<tr>
<td>F2</td>
<td>Management Accounting</td>
</tr>
<tr>
<td>F3</td>
<td>Financial Accounting</td>
</tr>
</tbody>
</table>

| Equivalent exams are currently available in paper-based format. However, completing a CBE is a very different experience to completing an exam on paper. The types of questions included in each format will be similar, but the way that each question is presented, and the answer recorded, differs between the two. In a CBE, candidates record their answers on the same screen where the question is shown; for paper-based multiple-choice exams answers are recorded on a separate Candidate Registration Sheet (CRS). Also, the whole experience of moving between questions and progressing through the exam is quite different. In a paper-based exam, you can see several questions at a time, whereas in a CBE students are presented with one question at a time to help them to focus on each question in turn. Another difference is in the way we read information presented in different formats; because of our experience online our eyes tend to jump around the computer screen rather than read it systematically as we would a printed page. For CBEs, therefore, remember to take time to read the question carefully to ensure you don’t miss any important information. |
Once you have entered your answer for a question, it is important to click on the ‘Submit’ button, for your answer to be saved. You can revisit questions and change answers by clicking on the ‘Clear’ button to remove your old answer; remember to click on ‘Submit’ to save your new answer once you have entered it.

Use the drop down question list and the timer to monitor your progress through an exam. For example, if you are less than halfway through an exam with only one of the two hours remaining then you are probably spending too much time on each question and should move through the remaining questions more quickly.

Do not spend a lot of time on questions you are unsure of; instead, move on and come back to these questions at the end of the exam. Any questions that you could not answer first time through will be highlighted by an asterisk in the question list and you can quickly move to these questions by clicking on the relevant question number in the list. When you return to these more difficult questions, if you still cannot work out the answer, then guess the most likely option and submit this response. For number entry questions, where no answer options are given, you should enter a number that you believe could be correct. You will not lose any marks for an incorrect guess.

Multiple-choice questions (MCQs)
MCQs are the most commonly used question type and feature in all of ACCA’s CBEs. Questions typically have four answer options, although some questions may have more than this. Figure 2 shows an example of an MCQ from the FA1 exam.

Multiple-response questions
Questions typically have four answer options, two of which are correct. However, sometimes the number of correct answer options varies, so it is important that you read the question carefully to see how many correct options you are looking for. Figure 3 shows a multiple-response question from a Paper FAB exam.

<table>
<thead>
<tr>
<th>QUESTION TYPES Currenty, ACCA CBEs comprise four main question types: multiple choice, multiple response, multiple response matching and number entry. All questions are worth two marks. Table 2 shows the question types available in each CBE.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MULTIPLE-CHOICE QUESTIONS (MCQS) MCQs are the most commonly used question type and feature in all of ACCA’s CBEs. Questions typically have four answer options, although some questions may have more than this. Figure 2 shows an example of an MCQ from the FA1 exam.</td>
</tr>
<tr>
<td>TABLE 2: COMPUTER-BASED EXAM QUESTION TYPES</td>
</tr>
<tr>
<td>QUESTION TYPE</td>
</tr>
<tr>
<td>Multi-choice</td>
</tr>
<tr>
<td>Multiple response</td>
</tr>
<tr>
<td>Multiple response matching</td>
</tr>
<tr>
<td>Number entry</td>
</tr>
</tbody>
</table>
Although multiple-response questions appear to be very similar to MCQs, you have to select more than one option by clicking on the square ‘tick boxes’ next to your chosen options, then clicking the ‘Submit’ button. If you select an incorrect number of answer options and then click ‘Submit’, a pop-up box will remind you of the number of options that you are required to select.

ANSWERING MULTIPLE-CHOICE AND MULTIPLE-RESPONSE QUESTIONS

For MCQs and multiple-response questions, all incorrect answer options have been chosen carefully because they are common incorrect responses to the question. At first glance, all answer options may appear plausible. It is, therefore, important to take the time to read all the answer options carefully rather than choosing those that look most obviously correct.

If the question involves a calculation, work out the answer rather than simply selecting the option that looks most likely to be correct. If you find a particular question difficult, start by discounting any answer options that you know are incorrect and then concentrate in more detail on those that remain.

MULTIPLE-RESPONSE MATCHING QUESTIONS

Figure 4, from the FMA exam, shows the standard layout for multiple-response matching questions.

This type of question comprises the actual question and several statements related to the question. Each statement is accompanied by several response options, in Figure 3 these are ‘abnormal gain’ and ‘abnormal loss’. Each statement should be matched to its correct response by clicking on the corresponding radio button in the row for the statement. Each statement needs to be completed correctly for the award of two marks.

IF A MULTIPLE-RESPONSE QUESTION INVOLVES A CALCULATION, WORK OUT THE ANSWER RATHER THAN SIMPLY SELECTING THE OPTION THAT LOOKS MOST LIKELY TO BE CORRECT. YOU CAN START BY DISCOUNTING ANSWERS THAT YOU KNOW ARE INCORRECT.
If only one statement is completed correctly you will not be awarded any marks. If you do not select a response for each statement, when you click ‘Submit’ a pop-up box will appear to remind you of the total number of responses that you should select.

NUMBER ENTRY QUESTIONS
The example in Figure 5 is from a Paper MA2 exam.

Figure 5: Number entry question
This is the only question type in a CBE where you need to enter the correct answer yourself, rather than choose from a list of options. To gain marks for a correct value, remember that numerical answers should be submitted without commas and using the full stop as a decimal point (eg 10530.25).

If you enter letters or symbols that the CBE system does not recognise, the system will either change or ignore your answer. Therefore before you press the ‘Submit’ button, check that you have presented your answer using the correct format.

Once you have clicked ‘Submit’, check that your answer is presented correctly next to the label ‘Your currently accepted answer’. If it does not appear as you intended press ‘Clear’ and try again.

SUMMARY
Completing a CBE is straightforward when you are familiar with what is required. Before you take your first CBE, go to www.accaglobal.com/students/exams/cbes/demo and use the familiarisation materials found there.

Remember, the computer will make sure that you select the correct number of answer options for each question; it is up to you to make sure that you choose the correct ones.

Helen Claydon is ACCA qualifications e-assessment manager.