INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

CAA Module 5
Models and Audit Trails

Examination 116
May 2016

Introduction

The attached report has been written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

A possible model with an audit trail is posted on the website. It should be noted that this may include more detail than would ordinarily be possible within the time allowed for the examination.

The specimen solutions are based on one possible approach to modelling the scenario set but the examiners gave credit for any alternative approach which they considered to be reasonable.

F Layton
Chair of the Board of Examiners

June 2015

General comments on Module 5

Module 5 aims to ensure that successful candidates can model data and develop an audit trail to document the work done.

Part 1 of this examination tests the ability to produce a complete and accurate model using sound and simple techniques, and the ability to perform reasonableness checks and automated checks throughout. Candidates are therefore expected to have a working knowledge of spreadsheets but note that a technical mistake is only penalised once and students can still earn marks for accurate and clear communication of what was done.

Candidates are expected to include checks within their models and specific marks are awarded for these. The number of marks available for checks gives a guide as to how many distinct checks are required.

Part 2 of this examination tests the ability to produce an audit trail that documents all the work done, including the methods, the parameters, the checks performed and the results of those checks. This can be done in a separate sheet within the spreadsheet model or in a separate Word document.

It should be noted that there will generally be more marks available for Part 2 than for Part 1 to reflect the importance of good communication and documentation when producing models.

General comments on Examination 116, May 2016

Candidates were provided with some data giving information about regular donations made to a charity over the last 5 years. Candidates were required to check and amend this data before using it to perform various analyses and calculations, including a projection of expected and required levels of donations in the coming year.

This exam primarily required the ability to perform data validation, correction and analysis.

The model should be robust and adaptable with as much automation as possible such that, for example, if any of the raw data were to be amended, the changes would feed through without further intervention. Candidates will therefore have lost marks for copying and pasting the data between worksheets (as opposed to linking all future calculations to the raw data).

Students should also note that, when using Goalseek (or similar methods), they should always include a 'flag' to indicate whether or not this needs to be re-run.

The most common reason for failure in this sitting was due to an inadequate audit trail. When describing methodology, students should note that they need to state their logic clearly (in words rather than using formulae or Excel functions). Further, a simple statement that a calculation has been done, with no explanation as to how, will not be sufficient.

END OF EXAMINERS' REPORT