

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

CAA Module 5 Models and Audit Trails

Examination 216
Oct 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.

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.

L Hatter
Chair of the Board of Examiners

November 2016

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.

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 II than for Part I to reflect the importance of good communication and documentation when producing models.

General comments on Examination 216, Oct 2016

This examination involved projecting the likely profitability of a new monthly magazine, sold on a subscriptions basis but with the option for subscribers to cancel at any time. The projections covered a 12-month period and allowed for sales, cancellations and associated costs.

Candidates were provided with some data giving simulations of monthly cancellation rates for the magazine subscriptions. Candidates were required to check (but not amend) this data before using it to project expected numbers of active subscribers over each future monthly period. Further calculations and charts were then required, based on these numbers.

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

The model should be robust and adaptable with as much automation as possible such that, for example, if an alternative set of simulations were used, 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). The use of named data ranges can be helpful for understanding and adapting the model.

The most common reason for failure in this sitting (as in previous sittings) was due to an inadequate audit trail. When describing methodology, students should note that they need to state their methods and 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.

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.

END OF EXAMINERS' REPORT