



Canadian Institute of Actuaries



Casualty Actuarial Society



Society of Actuaries

Pass Mark for Exam 4/C

Pass Marks on Joint CAS/CIA/SOA Multiple-Choice Exams

By Brett Rogers, SOA Registrar and Director of Exam Analysis

Exam 4/C is jointly administered by the Casualty Actuarial Society and the Society of Actuaries and is cosponsored by the Canadian Institute of Actuaries.

What Is The Pass Mark?

One of the most frequently asked questions about the multiple-choice actuarial examinations is, “What was the pass mark for the exam?” In other words, “How many questions did I need to answer correctly on the exam to pass?” In the few weeks that follow the release of grades (on the familiar 0-10 scale), this question is asked repeatedly of the SOA Education and Examination staff by various interested parties such as exam candidates, employers, and others who are just plain curious. Until now, everyone has gotten the same answer: Pass marks for all SOA examinations (including those jointly sponsored with the CAS) are confidential. However, that is now changing.

Multiple-Choice Examination Pass Marks To Be Released

The CAS Board of Directors and SOA Board of Governors both passed resolutions in June 2007 requiring that pass marks be released for all multiple-choice examinations beginning with those to be given in November 2007. The grades for those exams, using the familiar 0-10 scoring system, will be released to candidates in January 2008. The multiple-choice exam pass marks will be published on the SOA and CAS Web sites as percentages, rounded up if necessary to the nearest whole percent. Exam P/1 is administered via computer-based testing. As such, multiple forms of the exam are given and the number of correct answers needed to pass may differ from one candidate to another. For this exam, information about the range of passing scores will be provided.

A Word About the 0-10 Grades

The 0-10 grading scale, with scores of 6 and greater being passing grades, will continue to be used on all SOA exams. Raw scores are converted to 0-10 scores using increments of 10 percent of the pass mark. For example:

- A grade of 6 represents raw scores of at least 100 percent, but less than 110 percent of the pass mark.
- A grade of 5 represents raw scores of at least 90 percent but less than 100 percent of the pass mark.
- A grade of 0 represents raw scores that are less than 50 percent of the pass mark.
- A grade of 10 represents raw scores of at least 140 percent of the pass mark.

When setting the pass marks for the actuarial exams (multiple-choice or written-answer), the examination committees have one goal in mind: separating candidates who have demonstrated adequate knowledge of the material – and therefore deserve to pass – from those who have not demonstrated such knowledge. Scores are only meant to give candidates a relative idea of how close or far away they were from passing or failing and are not factored in when pass mark discussions are held. Consequently, on rare occasions there have been exams on which achieving a grade of 10 was not possible – even for a perfect paper. For example, let’s say the pass mark was 22 for a 30-question exam. One would have to achieve a score of 30.8 (140 percent of 22) to score a 10. Therefore, a grade of 9 would be the highest possible score by candidates on this exam.

Exam 4/C Pass Mark

Exam	Pass Mark*	Number of Exams	Effective Number of Exams	Number Passing	Percent Passing	Percent Effective Passing
October 2013	67%	1909	1723	749	39.2	43.5
June 2013	67%	2195	1984	934	42.6	47.1
February 2013	67%	1728	1579	786	45.5	49.8
Oct 2012	67%	1969	1800	908	46.1	50.4
May 2012	67%	2008	1798	904	45.0	50.3
February 2012	67%	1461	1318	665	45.5	50.5
October 2011	64%	1962	1723	858	43.7	49.8
June 2011	64%	1890	1681	745	39.4	44.3
February 2011	64%	1470	1304	598	40.7	45.9
November 2010	64%	1512	1358	612	40.5	45.1
August 2010	66%	1252	1163	552	44.1	47.5
April-May 2010	66%	1674	1559	702	41.9	45.0
November 2009	58%	2198	2004	959	43.6	47.9
May 2009	55%	1957	1861	746	38.1	40.1
November 2008	55%	1763	1698	769	43.6	45.3
May 2008	60%	1848	1757	868	47.0	49.4
November 2007	63%	1857	1786	926	49.9	51.8

*Since November 2009, Exam 4/C has been administered using computer-based testing (CBT). Under CBT, it is not possible to schedule everyone to take the examination at the same time. As a result, each administration consists of multiple versions of the exam given over a period of several days. The exams are constructed and scored using Item Response Theory (IRT). Under IRT, each operational item that appears on an exam has been calibrated for difficulty and other

test statistics and the pass mark for each exam is determined before the exam is given. All versions of the exam are constructed to be of comparable difficulty to one another. For the November 2009 administration of Exam 4/C, an average of 58% correct was needed to pass the exam.