

---

**CAS Exam 5 – Spring 2011 to Present**  
**ALL 10 – Study Materials Description**

---



---

## CAS Exam 5

### ALL 10 – Company Direction and Initial Comments

---

#### November 2018

Writing a report like this one has been on my “to do list” for quite some time. But as many of us experience daily, there is always too much to do and not enough time to do it in. Hopefully, you will find my comments relevant, my suggestions on how to best prepare insightful, and recommendations to achieve a passing score very much attainable.

#### ALL 10 – Preparation Materials for CAS Exams 5, 6 and 9 Moving Forward

For nearly 20 years, ALL 10 has produced study materials for candidates preparing for the upper level CAS Exams. It has been challenging to say the least, given the number of changes the CAS has made to the syllabus over time, especially with its re-write in 2011, the adoption of the two text books for Exam 5, the CAS Financial Reporting text for Exam 6, and the numerous re-writes to the syllabus for Exams 7 – 9.

In light of the above, we assessed where our resources can be best utilized, and have chosen to focus our efforts solely on Exams 5, 6 and 9.

By doing so, we will re-direct our efforts to producing additional exam relevant study aids to the above referenced exams. Among other key study aids in development, we are refining a large number of our Excel spreadsheets for our customers to download, as supplements to our article summaries, so that they can quickly assimilate and prepare for high point computational questions likely to appear on the exam.

These Excel files will be released over time and on a timely basis coincident with our recommended syllabus reading schedule.

#### CAS Technology-Based Examination (TBE)

I won't share my thoughts on the CAS' decision to eventually implement Exam 5 in TBE format again, other than to say thank goodness it will happen, because...all that needs to be said has been said at this point.

#### Questions

With respect to Exam 5, I've tried to put myself in the mindset of a candidate preparing for this exam. In doing so, I thought:

What questions do I need to ask? What guidance should I seek? What assistance can I get to help me best prepare for the Spring Exam?

It is my hope that these questions, and those of others preparing for the Exam, are answered in this report.

However, if you have specific questions that are not addressed in this document, please contact us via email at [support@all10.com](mailto:support@all10.com). We promptly reply to all inquiries.

Now that the “paper and pencil” exam format has been decided, it's time to prepare.

Start slowly, build momentum over time, and celebrate often the goals you achieve during your exam preparation period.

Thank you for your on-going patronage and best wishes in preparing for Spring 2019 Exam 5.

Rich Zarnik, ACAS

ALL 10, Inc. Owner

Last Updated: 12/9/2018

---

# CAS Exam 5 – Spring 2011 to Present

## Overview

---

### CAS Exam 5 Overview

The CAS Exam 5 Syllabus has remained largely unchanged since its release in 2011.

Changes prior to and with the release of the Spring 2016 syllabus include:

Removal of:

- Asset Share Pricing – Feldblum – Replaced with WM content in Chapter 13
- Insurance Services Office, Inc., Personal Automobile Manual (Effective 6-98)
- Werner, G, and Modlin, C., Basic Ratemaking, CAS, Fourth Edition, October 2010. (Chapter 2 only)
- AAA on Risk Classification, "Risk Classification Statement of Principles," June 1980.
- Friedland, J.F., Estimating Unpaid Claims Using Basic Techniques, 3<sup>rd</sup> Version Appendices A and B

Addition of:

- Statement of Principles Regarding P&C Unpaid Claim Estimates, CAS, November 2014.
- ASOP 12: Risk Classification (for all Practice Areas), American Academy of Actuaries, 2005
- ASOP43: P&C Unpaid Claim Estimates, AAA, 2007 and Updated for Deviation Effective May 2011
- Errata to the 3<sup>rd</sup> Version of the Friedland text in the Fall of 2016.

While these changes were warranted, there have only been a few questions based on the content from the above readings that have appeared on subsequent exams.

### CAS Exam 5 Statistics

Below are some key statistics associated with the exam since Spring 2013:

| Exam                    | Number of Candidates * | # of Passing Candidates | Total Points | Pass Mark | Pass Mark As a % of Pts | Effective Pass Ratio | Total Questions | Avg Pts per Question |
|-------------------------|------------------------|-------------------------|--------------|-----------|-------------------------|----------------------|-----------------|----------------------|
| Fall 18                 |                        |                         | 55.00        |           |                         |                      | 24              | 2.29                 |
| Spring 18 - Combined ** | 883                    | 559                     | 55.50        | 42.00     | 75.7%                   | 63.3%                | 26              | 2.13                 |
| Spring 18 - Makeup ***  |                        |                         | 53.50        | 40.25     | 75.2%                   |                      | 25              | 2.14                 |
| Fall 17                 | 701                    | 301                     | 55.70        | 37.00     | 66.4%                   | 42.9%                | 28              | 1.99                 |
| Spring 17               | 746                    | 338                     | 57.50        | 40.50     | 70.4%                   | 45.3%                | 26              | 2.21                 |
| Fall 16                 | 711                    | 292                     | 56.00        | 40.25     | 71.9%                   | 41.1%                | 27              | 2.07                 |
| Spring 16               | 803                    | 392                     | 57.75        | 41.50     | 71.9%                   | 48.8%                | 25              | 2.31                 |
| Fall 15                 | 728                    | 243                     | 55.75        | 38.25     | 68.6%                   | 33.4%                | 25              | 2.23                 |
| Spring 15               | 726                    | 275                     | 57.25        | 40.00     | 69.9%                   | 37.9%                | 25              | 2.29                 |
| Fall 14                 | 684                    | 258                     | 58.25        | 40.75     | 70.0%                   | 37.7%                | 24              | 2.43                 |
| Spring 14               | 728                    | 305                     | 59.75        | 42.50     | 71.1%                   | 41.9%                | 23              | 2.60                 |
| Fall 13                 | 683                    | 238                     | 58.50        | 41.00     | 70.1%                   | 34.8%                | 24              | 2.44                 |
| Spring 13               | 773                    | 263                     | 63.50        | 42.50     | 66.9%                   | 34.0%                | 26              | 2.44                 |

\* Excluding Candidates below 50% of the Pass Mark  
\*\* Combined Results  
\*\*\* Excluding question 21

In general, total points and average points per question have decreased over time, while the effective pass ratio (excluding the Spring 18 exam) has been slightly increasing over time.

However, given that effective pass ratios have ranged from the high 30s to mid 40s over the past four years, with the exception of the Spring 2018 TBE, it is clear that candidates taking this exam find it challenging to achieve a passing score.

**Last Updated: 12/9/2018**

---

# CAS Exam 5 – Spring 2011 to Present

## Overview

---

### CAS Exam 5 – Predominately Computational

It can be argued that Exam 5 is computationally more rigorous relative to CAS exams 6, 7 and 9. This is evidenced by the lower overall point value of essay based point questions on the exam, relative to the higher overall point value of short answer questions on the upper level exams.

With an eye to Spring 2019 CAS Exam 5, it is essential that candidates work on accuracy and calculation speed, but only after putting in the time to build a solid foundation of the concepts and formulas presented in the articles.

### Candidates

It's safe to say that most candidates taking Exam 5 for the first time are initially shocked at the radical change in the type of exam they must prepare for; transitioning from taking MC question tests in the lower level CAS/SOA exams to preparing for computational and short answer questions in the upper level CAS exams.

Candidates that have passed on their first attempt, and for sure those that have passed on their second attempt, know how much effort it takes to pass this exam.

### CAS Examiner's Reports

CAS Examiner's Reports, dating back to the Spring 2014 Exam, provide candidates with a number of useful preparation suggestions. Here are some of the more important ones:

- i. "Candidates should note that the instructions to the exam explicitly say to show all work; graders expect to see enough support on the candidate's answer sheet to follow the calculations performed."
- ii. "Candidates should justify all selections when prompted to do so."
- iii. Candidates should try to be cognizant of the way an exam question is worded. They must look for key words such as "briefly" or "fully" within the problem.
- iv. "Some candidates provided lengthy responses to a "briefly describe" question, which does not provide extra credit and only takes up additional time during the exam."
- v. "Candidates should be cautious of relying solely on study manuals, as some candidates lost credit for failing to provide basic insights that were contained in the syllabus readings."
- vi. "It should be noted that all exam questions have been written and graded based on information included in materials that have been directly referenced in the official syllabus, which is located on the CAS website.

The CAS takes no responsibility for the content of supplementary study materials and/or manuals produced by outside corporations and/or individuals which are not directly referenced in the official syllabus."

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### “My Why”

In light of the above, and to assist candidates in achieving a passing score, I chose to develop study materials product with three main goals:

1. Create article summaries based solely on the content of the actual reading.  
This was done by first conducting a “page” by “page” review of the syllabus readings, summarizing the most salient content that aligned with the CAS LO and KS, and disregarding any superfluous material in the readings during the summarization process.
2. Provide robust solutions to past CAS computational questions.  
CAS solutions can be vague, lacking in detail, and difficult to follow at times. <sup>1</sup>
3. Develop new and innovative products. Included in the Study Materials program is e-Review, a set of syllabus section tests that include both video based and written solutions.

#### Three main goals in developing the Study Materials:

##### I. Create article summaries based solely on the content of the actual reading.

Many providers of CAS Exam 5 Study Materials provide chapter summaries of the content found in the actual syllabus readings “in their own words”. If I were a candidate preparing for the exam, I’d find this beneficial since the syllabus readings are extremely wordy and filled with extraneous information.

However, the approach our company has taken to develop our study materials is radically different.

As noted by the Examiners on the previous page, “all exam questions have been written and graded based on information included in materials that have been directly referenced in the official syllabus”.

That is exactly why the source of our summarizations is the content within the actual syllabus readings.

To view how we summarize each and every syllabus reading page, go to <http://www.all10.com/cas-exam-5/> and click on the icon “Using the Study Aids”. While this video was prepared for those sitting for CAS Exam 6, the same summarization procedures were used in summarizing the Exam 5 syllabus readings.

Two other key criteria we used in developing the manuals are as follows:

1. Produce summaries that reduce the syllabus reading material to no more than 60% of the original content.  
The Basic Ratemaking text contains over 420 pages and the Friedland text contains over 450 pages for a total of 870 pages. Our article/chapter summaries comprise 500 pages which reduces the syllabus readings to less than 60%.
2. Include charts, graphs, triangles, etc. in the summaries to reinforce key concepts discussed in the readings.  
For example, we have numerous condensed triangles inter-mixed with our summaries of Chapters 7 – 17 of the Friedland text.

In light of the above, we believe our summarization process aligns well with CAS Examiner’s comments on study manuals to contain content that reflects the official syllabus readings.

<sup>1</sup> It’s important to mention that it is not the purpose nor the objective of CAS examiners to provide robust solutions to past CAS questions, but rather to provide sample answers of the most common correct responses.

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### Three main goals in developing our Study Materials:

#### II. Provide robust solutions to Past CAS computational questions

In our opinion, there are no better practice questions to work to best prepare for the actual exam than past CAS questions.

Why?

First, as stated by the CAS, the questions are developed by a team that typically includes new Fellows, who are placed on an exam that best fits the skill sets of the question writer. A three year commitment is requested by the Exam committee to maintain quality and consistency in the development of the exam.

After submitting questions, the entire committee meets for two days to refine the questions and assemble the exam. This process results in a set of questions that most candidates find challenging.

Second, exam 5 now has a critical mass of past CAS questions and solutions for candidates to review.

With the administration of Fall 2018 exam, there are more than 310 questions (which excludes questions no longer relevant due to syllabus changes) available for candidates to work since the release of the Spring 2011 Exam.

Unfortunately, solutions to computational questions provided by the CAS are not always intuitive<sup>2</sup>.

In fact, it takes a great deal of time to review a number of past CAS solutions in an effort to understand the nuances in the solution process.

To that end, many of our solutions offer unique elements to overcome these shortcomings, including:

1. **Initial comments.** To assist candidates in formulating an overall approach to solve a given question, we provide key excerpts from the syllabus readings to initiate your thought process on how to frame your solution. See numerous examples of our initial comments in our solutions to ratemaking chapter 8 in our [Study Program Excerpts Report](#)

Formulating a clear path to problem solving is the biggest stumbling block for candidates when attempting to solve questions with high point values. By providing a framework on how to problem solve, one can employ a step by step process in arriving at the final answer.

2. **Step by Step solution processes** in both summarized and detailed formats.

In many of our solutions, we suggest that candidates write several equations down first, before solving a problem, to assist in developing a step by step problem solving process.

Rather than describing this process, see our solution to question 8 from the Fall 2016 exam, found in the [Study Program Excerpts Report](#), as an example.

Our approach to computational problem solving is instructional.

It is not meant to be replicated on the exam as it would require too much time to reproduce in its entirety. However, candidates that adopt a blended problem solving process that streamlines their approach with our current problem solving methods can provide Examiner's with what they seek; that being "enough support on the candidate's answer sheet to follow the calculations performed."

<sup>2</sup> Again, its important to mention that it is not the purpose nor the objective of CAS examiners to provide robust solutions to past CAS questions, but rather to provide sample answers of the most common correct responses.

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### Three main goals in developing our Study Materials:

#### III. Develop new and innovative products.

##### e-Review Questions and Online Video Solutions

#### Product Background

Back in 2014, we wrote to all candidates that attained Fellowship to offer our congratulations.

We also asked them a single question: Having attained Fellowship, are you willing to partner with us to write questions that mirror the level of difficulty of actual CAS Exam questions, and provide appropriate solutions?

Most Fellows chose not to respond. I cannot blame them! Having spent years taking these exams and having attained Fellowship, they simply wanted to reclaim their personal life. Further, new Fellows are recruited by the CAS to write questions for the CAS exams. This is often a thankless undertaking on their behalf, for which we should all be grateful for their efforts.

However, several Fellows did respond which lead to the creation of the “e-Review” product.

#### Product Purpose

The purpose of the e-Review product was three fold:

- i. To produce questions and solutions that mirror the level of difficulty of actual CAS Exam to the extent possible.
- ii. To offer video based solutions, in lieu of paper based solutions, in an effort to encourage candidates to engage in **Active Learning**.

See our description of what constitutes **Active Learning** in our [Study Program Excerpts Report](#).

- iii. To create syllabus section tests, with questions drawn from smaller subsections of the entire syllabus, to assist candidates in determining “what they know and what they don’t know” in the weeks leading up to their final exam preparation.

#### Product Structure

We structured the tests as syllabus section tests, containing fewer questions than would be normally seen on an actual CAS Exam. We did so for the following reasons:

- i. To provide more questions from fewer readings to give you a better indication of where your strengths and weakness lie. CAS examiners have 16 chapters and 6 appendices from the ratemaking text and 17 chapters from the reserving text to develop questions.

Creating a 25-question exam that contains one question from 25 of the 39 available readings does not help a candidate to better assess what they know and what they don’t know.

- ii. To create tests that require less time to complete, while offering a greater number of tests that still cover the vast majority of content from both texts.

Having received, and thanked, previous customers who shared their comments about the quality of these questions, and suggested refinements to some of the questions and solutions, we believe these tests achieve their intended objectives.

Of course, having access to more questions is preferable, so we have developed quite a few of our own, as discussed on the next page.

**Last Updated: 12/9/2018**

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### Additional Practice Tests and Exams

We provide three types, covering Syllabus Section A: Basic Ratemaking and Syllabus Section B: Estimating Claim Liabilities readings:

1. Six Modified Past CAS Multiple Choice Question Tests (Syllabus Section Based)
2. Six Practice Tests (Syllabus Section Based)
3. Four Practice Exams

#### MC Tests, Practice Tests and Practice Exams.

**A. MC Tests** provide candidates with a quick performance metric to assess their understanding of the syllabus readings. Each test contains 15-20 questions, with questions developed from various subsections of readings within Syllabus Section A and Syllabus Section B.

Some MC questions are straight forward while others have unique twists to test your understanding of various nuances presented in the question. Work these tests periodically over a 12 to 16 week period.

#### B. Practice Tests

1. Practice tests comprise a larger number of questions from a smaller number of readings than you would see on an actual exam. This is exactly what candidates need; more questions to work on from a smaller number of readings to get a better idea of what you know and what you need to work on.

Comparing your answers to our solutions should give you a good idea of what you know and what topics you may want to spend further time reviewing prior to sitting for the actual exam.

2. Many of the questions begin with " According to ...".

On an actual exam, none of the questions will begin with " According to ...". Prefacing questions in this manner was used to assist candidates in their recall of what topics are discussed by author and article.

3. In our opinion, our solutions would be deemed sufficient and acceptable by Examiners. However, these solutions would not be the only acceptable ones.

**C. Practice Exams** differ from **Practice Tests** in two main ways:

1. They include questions from both Syllabus Section A and Syllabus Section B, which is more representative of actual CAS Exams.
2. The questions tend to be more difficult than those in the Practice Tests, and thus require more time to complete.

From least to most difficult, work Practice Tests, Practice Exams and e-Review Exams in this order.

# CAS Exam 5

## ALL 10 – Study Materials Description

### Study Programs for CAS Exam 5

We offer two Study Programs for Spring 2019 CAS Exam 5:

1. Online Review Course, Study Materials and e-Review
2. Study Materials and e-Review

The following chart highlights the specific components that accompany each program.

| <b>ALL 10 - Exam 5 - Spring 2019 Product Offerings</b>   |  |                  |                  |                |                  |               |
|--|--|------------------|------------------|----------------|------------------|---------------|
| Online Review Course and Study Materials (OLRC) vs. Study Materials (SM)                         |  |                  |                  |                |                  |               |
| <b>Purchase Price</b>  | OLRC   |                  |                  | SM             |                  |               |
|  | Digital  | Digital+ Print   | Digital          | Digital+ Print |                  |               |
| Digital download available through www.all10.com   |  |                  |                  |                |                  |               |
| Print option purchase at ABS or Actex. Delivery by ABS/Actex                                     | \$445  | \$505            | \$350            | \$410          |                  |               |
| <b>Study Manuals</b> (in Digital or Digital+Print)   | Study Manuals Volumes and Page Count   |                  |                  |                |                  |               |
| Accompanies the purchase of either the OLRC or SM  | <u>Vol 1a</u>  | <u>Vol 1b</u>    | <u>Vol 2a</u>    | <u>Vol 2b</u>  | <u>Total</u>     |               |
|  | 402  | 525              | 412              | 406            | 1745             |               |
| <b>Preparatory Tests</b> (in Digital Download Only)  | Preparatory Tests - Vol 3  |                  | e-Review Tests   |                | Total            |               |
| Accompanies the purchase of either the OLRC or SM  | <u>Questions</u>   | <u>Points</u>    | <u>Questions</u> | <u>Points</u>  | <u>Questions</u> | <u>Points</u> |
| Six e-Review Tests (Syllabus Section Based)  |  |                  | 110              | 330            |                  |               |
| Six Modified Past CAS MC Question Tests (Syllabus Section Based)                                 | 110  | 110              |                  |                |                  |               |
| Six Practice Tests (Syllabus Section Based)  | 120  | 265              |                  |                |                  |               |
| Four Practice Exams  | <u>100</u>   | <u>200</u>       |                  |                |                  |               |
| Total  | 330  | 575              | 110              | 330            | 440              | 905           |
| <b>Online Review Course Components</b>   |  |                  |                  |                |                  |               |
| a. Downloadable Excel Spreadsheets   | <u>Questions</u>   | <u>Solutions</u> |                  |                |                  |               |
| Syllabus Sections A and B - Questions by Chapter - TBE Format                                    | 150  | 533              |                  |                |                  |               |
| Fall 2017 and Spring 2018 CAS Exams in TBE Format  | <u>54</u>  | <u>175</u>       |                  |                |                  |               |
|  | 204  | 708              |                  |                |                  |               |
| b. Weekly Emails - Don't Fall Behind   | Beginning 12/31/2018 and identifying a manageable number of readings to review weekly<br>Concluding on 3/25/2019 with additional email guidance through the April 29 Exam date |                  |                  |                |                  |               |
| c. Weekly Question Downloads   | Beginning 12/31/2018. Download recommended questions from the manual to work weekly  |                  |                  |                |                  |               |
| d. Access to instructional and problem solving videos viewed from desktops, laptops, and tablets | Not available on smart phones.   |                  |                  |                |                  |               |
| e. Access to our R.A.C.E. series of short-answer problem solving videos                          |  |                  |                  |                |                  |               |
| f. Additional Excel Spreadsheets (TBD)   | Either Chapter Specific or Additional Questions for download   |                  |                  |                |                  |               |

### Printed Manuals

Many providers of upper level CAS exam study materials offer candidates a pdf download option only. However, there are distinct disadvantages of only having pdfs to study from, which are described on the next page.

Thus, we strongly recommend that you have manuals that are printed and bound at your disposal.

To that end, we have partnered with [Actuarial Bookstore](#) and [Actex](#) to allow you the option of purchasing our study manuals in print format.

Last Updated: 12/9/2018

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### Benefits of having both Digital and Printed Manuals at your disposal

| <u>Digital Manuals</u>   | <u>Printed Manuals</u>   |
|--|--|
| 1. Download to laptops and tablets.  | 1. Mark up and handwrite personal notes.<br><br>Writing crystalizes thinking and the most effective way to do this is by using pen/pencil to jot down your thoughts on what to focus on.   |
| 2. Quickly access content via bookmarks.<br><br>All of our study manuals and prep tests contain bookmarks to summaries, questions and solutions. | 2. Portability. Carry the manuals you need, leave the rest at home.<br><br>3. Ease of use. Spiral binding allows you to flip to specific content quickly.<br><br>4. Retention. You stare at computer screen data daily.<br><br>Given the dense material contained in study manuals, you are more likely to absorb and retain the material better by reading from a book. |

In short, studying material in print and digital download formats enhances your ability to understand and recall material.

Further:

- We offer this option solely as a convenience to our customers.
- We make no profit in offering our study manuals in printed format; our cost is simply passed on to the buyer.

So consider purchasing our study materials in both print and digital format, and start studying!

#### Why two study programs

1. To provide products tailored to a candidate's needs.  
Some candidates are just looking for study manuals and tests.  
Others are looking for additional online assistance, especially those that had an unsuccessful sitting.
2. To provide alternative products to candidates that purchased third party exam material but did not pass.  
Use of a single company's exam preparation product does not guarantee a "pass".  
However, using study aids from different exam preparation providers can make a huge difference.  
By having access to study material presented from several vantage points, one can choose which author's methods and approaches to problem solving best resonate with them. This in turn expands one's ability to retain the material and then transcribe that knowledge to paper on exam day.
3. To offer study programs at affordable price points.  
We are not the most expensive, nor are we the cheapest provider of CAS Exam study materials.  
Our study materials are fairly priced making them a cost-effective choice for those who expect a quality product that delivers exceptional value in exchange for their financial investment.

**Last Updated: 12/9/2018**

---

## CAS Exam 5

### ALL 10 – Study Materials Description

---

#### Final Comments:

This document is an abridged version of our complete study program description report.

To learn more about our Online Review Course and Study Materials option, [click here](#).

To download excerpts of our Study Aids, [click here](#).

We hope we have clearly identified what is and what is not included in each study program.

However, if you have any questions, email us at [support@all10.com](mailto:support@all10.com)

We reply promptly to all questions.

We wish you the best in your preparation for the Spring 2019 CAS Exam 5.

-Rich

#### P.S.

Try before you buy!

Sign up and you'll receive:

- 1 week access to all documents to select articles covered in our Online Review Course

- An email from our support team, within 24 hours of signing up, with login credentials to access the e-Learning Center.

- Concepts and Issues summaries by article

- Data on past CAS exams by year

- A preview of Article Summary, Problem Solving, and R.A.C.E. videos

Sign up at <https://all10.com/sign-up/>