Future FELLOWS

March 2011, Volume 17, No. 1

Performance Optimization—Write Your Best Exam

By Suzy Poole, Candidate Representative to the Candidate Liaison Committee

Exam day looms on the horizon. You're on target with your planned study hours, you've mastered your flashcards, and you can crank out a sample exam item response that is truly a work of art. None of this really matters, however, unless you can demonstrate the wealth of knowledge you've gained through grueling months of preparation during your exam sitting.

Writing an exam that showcases your newfound actuarial expertise and results in achieving the coveted score of 6 or better requires you to be at the top of your game – but what does that mean?

The Arousal-Performance Relationship

Perhaps the Yerkes-Dodson Law can shed some light on how to optimize your performance. Over a century ago Robert Yerkes and John Dodson (1908) conducted a classic psychological experiment to study the arousal-performance relationship. Mice performed tasks designed to represent conditions ranging from easy to difficult under varying levels of stress stimuli. Yerkes and Dodson measured the time it took for mice to achieve habit-formation for the various combinations of task difficulty and stress stimuli.

The conclusions stemming from this experiment were twofold. Based on their research, Yerkes and Dodson observed that as levels of arousal approached extremes, either at the very low or very high ends of the spectrum, performance deteriorated. An optimal level of arousal resulted in maximum performance. Furthermore, task difficulty dictated the optimal level of arousal, such that maximum performance of easier tasks required higher levels of arousal, whereas the best performance of more complex tasks was

⇨ turn to page 2

Actuarial Alphabet Soup

By Dan Tevet, ACAS, Candidate Liaison Committee

Like most professions, the actuarial world is replete with technical abbreviations -- from ALAE to YTD, and everything in between. If you are not already familiar with these terms, you will likely learn them soon, either from exams and/or from work experience. But, as an actuary you are also likely to encounter many administrative abbreviations. From the simple and common like CAS and SOA to the more obscure, here is your guide to the organizational abbreviations you are likely to encounter as you embark on your career as an actuary.

CAS – Casualty Actuarial Society. An organization dedicated to the advancement of actuarial science, particularly as it applies to property and casualty insurance. It administers actuarial exams, supports research and publication, and holds conferences and meetings on various topics of relevance to property and casualty actuaries. Based on educational achievements, it awards the Associate of the Casualty Actuarial

⇨ turn to page 4

Dates to Remember

Exam Registration Deadlines

Exams 3L, 5, 7, and 9
March 24, 2011

Exam 3F/MFE
March 31, 2011

Exam 1/P
April 6, 2011

Exam 2/FM
April 28, 2011

Exam 4/C
May 5, 2011

Refund Deadlines

Exams 3L, 5, 7, 9
May 2, 2011

CASSeminarsandMeetings

ERM Symposium
March 14-16, 2011
Swissotel Chicago
Chicago, Illinois

Ratemaking & Product Management Seminar
March 20-22, 2011
Marriott New Orleans
New Orleans, Louisiana

CAS Spring Meeting
May 15-18, 2011
The Breakers
Palm Beach, Florida

Performance Optimization

from page 1

achieved under lower levels of stimuli.

Yerkes and Dodson's results suggest that the arousal-performance relationship can be characterized by an inverted U. Essentially, levels of arousal that are either too low or too high lead to subpar performance; a moderate or optimal level of arousal supports maximum performance. The optimal level of arousal is directly linked to the task at hand (see figure below).

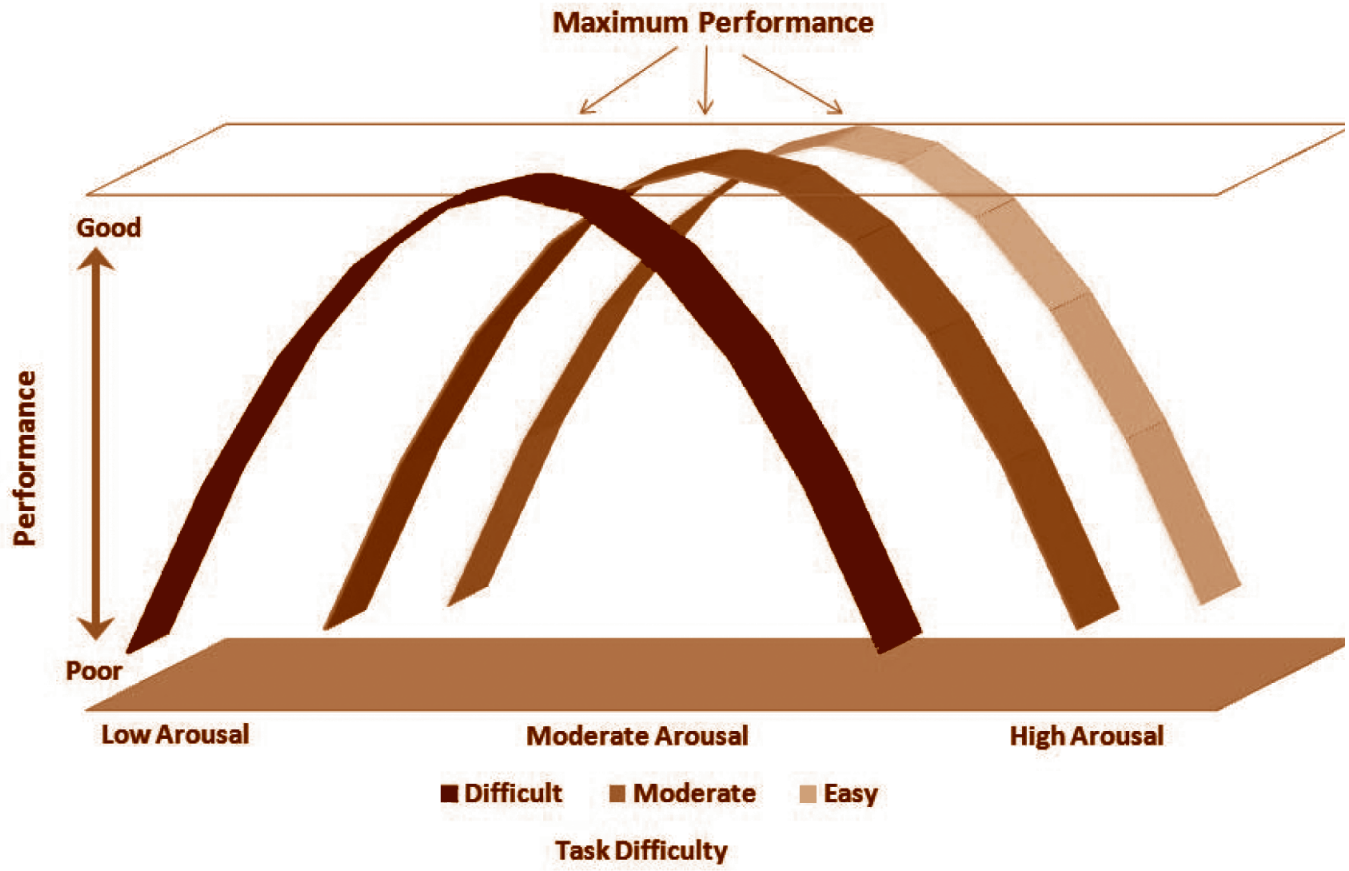
So how can you use the Yerkes-Dodson Law to give you a boost during your next exam? First, evaluate task difficulty. The opinion that an upcoming actuarial exam qualifies as a complex task is virtually unanimous among candidates. Consequently, based on Yerkes and Dodson's research, the optimal level of arousal for writing an exam will be somewhat lower than that required to attain maximum performance on the Sunday crossword puzzle. Determining your unique optimal level of arousal is essential. Yerkes and Dodson, however, might suggest that while a few butterflies in your stomach will be helpful, anything requiring radical antacids will likely put you at a disadvantage.

Self-Efficacy Theory

Next, consider psychological principles that can facilitate your ability to achieve an optimal level of arousal. Albert Bandura's contributions to the vast body of research dedicated to the psychology of human performance can provide you with actionable takeaways to prepare psychologically for your next exam. Bandura's (1977) view of human behavior is based on social cognitive theory, which asserts that people learn from one another by observing and modeling behaviors, reactions, and attitudes. At the heart of Bandura's research is the concept of self-efficacy, a person's sense of being capable of planning and executing actions that will lead to success in a specific situation.

Why might you be interested in enhancing your self-efficacy for writing an exam? Bandura has established that self-efficacy influences effort, perseverance in the face of adversity, stress in difficult situations, and ultimate level of accomplishment achieved (1977). Sounds pertinent, doesn't it? For example, people with stronger self-efficacy generate efforts that are more vigorous and persistent (Bandura, 1986). On the other hand, individuals with lower self-efficacy perceive a task as being more difficult than it really is, resulting in greater anxiety. In a nutshell, Bandura contends that developing self-efficacy can have a positive effect on your psychological state, which in turn can help you to tackle an exam with maximum performance.

How can you improve your self-efficacy for writing an actuarial exam? Bandura (1977) cites the following four major



sources of self-efficacy:

Performance Accomplishments – According to Bandura, the most effective way to bolster your self-efficacy is to actually succeed at a task, thereby creating an opportunity for self-modeling. Since you'll only need to pass each actuarial exam once, the next best option for simulating the mastery experience is to incorporate a healthy dose of realistic practice exams into your preparation timetable. Take these exams when you have a solid understanding of the material so that you'll be able to draw confidence from successful experiences.

Vicarious Experience – Do you have friends or coworkers taking exams? Another opportunity to develop self-efficacy may be right across the cubicle wall. Bandura suggests that observing individuals similar to you achieving success at a task can increase your belief in your ability to do the same.

Verbal Persuasion – Surround yourself with people who will build you up. Bandura's work indicates that positive verbal encouragement from others really does help you to improve your belief in yourself.

Physiological States – Your body may be telling you that you are anxious, but you can control your response to these stress signals. Bandura contends that adopting a strategy to mediate your reaction to your own anxiety can positively affect your ability to perform. The anxiety symptoms may exist, but you can choose how they will or will not affect you.

As you enter the homestretch in your exam preparation, keep in mind the value of tending to your psychological readiness. Learn the material well, take steps to pump up your belief in your ability to succeed, and hone in on your optimal level of arousal. Make sure that the exam graders have a chance to evaluate your *maximum* performance.

References

Yerkes, R.M. & Dodson, J.D. (1908). The relationship of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18: 459-482.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.

Bandura, A. (1986). *Social Foundations of Thought and Action*.

Actuarial Alphabet Soup

from page 1

Society (ACAS) and Fellow of the Casualty Actuarial Society (FCAS) designations. (www.casact.org)

SOA – Society of Actuaries. Similar to the Casualty Actuarial Society, but it deals with all types of insurance other than property and casualty (such as life and health insurance). Based on educational achievements, it awards the Associate of the Society of Actuaries (ASA), Fellow of the Society of Actuaries (FSA), and Chartered Enterprise Risk Analyst (CERA) designations. (www.soa.org)

CERA – Chartered Enterprise Risk Analyst. A recently formed credential for expertise in the area of Enterprise Risk Management (ERM). Currently, few organizations are able to issue the CERA credential, and the only U.S.-based one that can do so is the Society of Actuaries. However, it is anticipated that other actuarial organizations, including the CAS, will soon be able to issue the credential as well. (www.ceranalyst.org and www.ceraglobal.org)

CCA – Conference of Consulting Actuaries. A professional society of actuaries engaged in consulting (as opposed to being employed by an insurance company) in the U.S. and Canada. The group's mission is to advance the quality of consulting practice, support the needs of consulting actuaries, and represent the interests of consulting actuaries. Based on educational advancement in other actuarial organizations (like the CAS and SOA) and on work experience, it awards the designations Associate of the Conference of Consulting Actuaries (ACA) and Fellow of the Conference of Consulting Actuaries (FCA). (www.ccactuaries.org)

ASPPA – American Society of Pension Professionals and Actuaries. An organization for career retirement plan professionals. It offers various exam-based professional certifications and educates both the public and its members on retirement and pension-related topics. (www.asppa.org)

EA – Enrolled Actuary. An actuary who has been licensed by the federal government to perform pension plan analyses that are required by the Employee Retirement Income Security Act (ERISA) of 1974. (www.enrolledactuaries.org)

AAA – American Academy of Actuaries. The Academy represents actuaries in all practice areas within the United States, and generally serves as the profession's voice on public policy and professionalism issues. Based primarily on membership in other U.S.-based actuarial organizations, it awards the designation Member of the American Academy of Actuaries (MAAA). The ABCD and the ASB (described below) are both housed within the Academy. (www.actuary.org)

ABCD – Actuarial Board for Counseling and Discipline. Provides guidance to any actuary seeking assistance on a matter of professional conduct and hears complaints about possible violations of the actuarial Codes of Professional Conduct. It is important to note, however, that in instances of alleged conduct violations, the ABCD cannot itself impose discipline but can only recommend disciplinary action. Actuaries struggling with a matter of professional conduct are encouraged to contact the ABCD. (www.abcdboard.org)

ASB – Actuarial Standards Board. Responsible for establishing, improving, and communicating the Actuarial Standards of Practice (ASOPs). The ASOPs identify what the actuary should consider, document, and disclose when performing an actuarial assignment. There are over 40 ASOPs covering everything from trending procedures in property and casualty insurance to actuarial communications. (www.actuarialstandardsboard.org)

CUSP – Council of U.S. Presidents. A committee of the American Academy of Actuaries' Board of Directors composed of the president and president-elect of the following organizations: Academy, CAS, SOA, CCA, and ASPPA. The purpose of the CUSP is to facilitate discussion among actuarial leaders on issues of importance to the entire U.S. actuarial profession.

CIA – Canadian Institute of Actuaries. As the national organization of the actuarial profession in Canada, it is essentially the Canadian counterpart to the American Academy of Actuaries. Based on educational advancement in organizations like the CAS and SOA, the CIA awards the designation Fellow of the Canadian Institute of Actuaries (FCIA). (www.actuaries.ca)

IAA – International Actuarial Association. A worldwide association of actuarial organizations that seeks to represent the actuarial profession and promote its reputation internationally. The Academy, ASPPA, CAS, CCA, SOA, and CIA are all member organizations of the IAA. (www.actuaries.org)

ASTIN – Actuarial Studies In Non-Life Insurance. A section of the IAA that seeks to promote actuarial research and to further the mathematical foundation in non-life insurance. It publishes the *ASTIN Bulletin*, which is a journal devoted to the mathematics of insurance, particularly on topics related to general (non-life) insurance.

⇨ turn to page 7

Sound Off

What Is An Actuary?

By Dan Tevet, ACAS, Candidate Liaison Committee

Random Guy: Hi, my name is RG.

Joe the Actuary: Hi, I'm Joe, nice to meet you.

Random Guy: So Joe, what do you do?

Joe the Actuary: I'm an actuary.

Random Guy: <<*Blank stare*>> Oh, that's like an accountant, right?

Alternate ending -- Random Guy: Oh, like the guy in *Along Came Polly*!

Been there? As actuaries, we are very fortunate to be working in a field that is consistently ranked as one of the top jobs. Unfortunately, many people do not understand what we do.

Admittedly, it is pretty difficult to describe actuarial work in simple terms. The formal definition is something like "Actuaries assess the financial implications of future contingent events," but when asked by someone in a social situation what you do, that definition may not shed much light (and yes, I am making the leaping assumption that actuaries do sometimes interact in social situations).

So, we asked our panel of actuaries how they describe to an average person in a social situation, in two sentences or less, what an actuary is/what they do as actuaries. Here are our favorite responses:

1) Actuaries usually do two main things: figure out how much to charge for insurance or figure out how much to set aside to pay outstanding insurance claims.
2) An actuary builds mathematical models to put a price tag on future risks, like the risk you will crash your car or the risk your house will burn down.
3) We are number crunchers for insurance companies; for example, we set auto insurance rates and make sure the company has enough money to pay claims so it won't go bankrupt.
4) Actuaries use a combination of insurance knowledge, math, and historical data to predict future insurance events. It is sort of like a combination of being a math whiz and weather forecaster.
5) As a reserving actuary, I estimate the total amount the company is going to pay for things that have already happened.
6) An actuary makes sure the amounts paid by the customers are adequate to cover losses in the future.
7) An actuary is someone who combines business with statistical and economic knowledge to prepare for future financial uncertainty.
8) Actuaries are the math people in the insurance industry. We evaluate the risks for insurance policies.
9) We are professionals trained to put a price tag on risk. We gather information from many sources, add judgment, and help make more enlightened decisions.
10) Actuaries figure out how often claims will happen, and when they happen, how much the claims will cost.
11) Actuaries are trained experts in determining, based on a forecast of expected losses and expenses, how much insurance should cost.
12) An actuary forecasts the cost of unknown events that may or may not happen at some undetermined time in the future.
13) Actuaries model insurance statistics like Nate Silver models baseball statistics and forecasts election outcomes.
14) Lion-tamer : lion :: actuary : risk.
15) Actuaries are the necessary risk professionals. With our understanding of the nature of uncertainty we can add value to any business enterprise.

And to inject some comedy into *Future Fellows*, here are the top humorous responses.

16) Actuaries ARE NOT like the guy from *Along Came Polly.*
17) The actuary sits in the passenger seat and tells the blind driver how to drive the car by looking in the rearview mirror.
18) Someone who brings you a solution you don't understand to a problem you never knew you had.
19) Actuaries tell insurance companies how much they should have charged for insurance last year.

Future Fellows would like your feedback. When asked by an average person in a social situation what actuaries do, how do you respond? Like the ones above, we are looking for answers that are two short sentences or less and are easy to understand. Please use the Candidate Liaison Committee feedback form to submit your best response(s) [http://www.casact.org/newsletter/index.cfm?fa=feedback&et=1&dom=03272008&ml=admis].

Sound Off is expected to be an occasional feature in *Future Fellows.* Your submissions about "what is an actuary" will be reviewed and our favorite responses will appear in an upcoming issue. ff

Book Summary

The Leadership Challenge

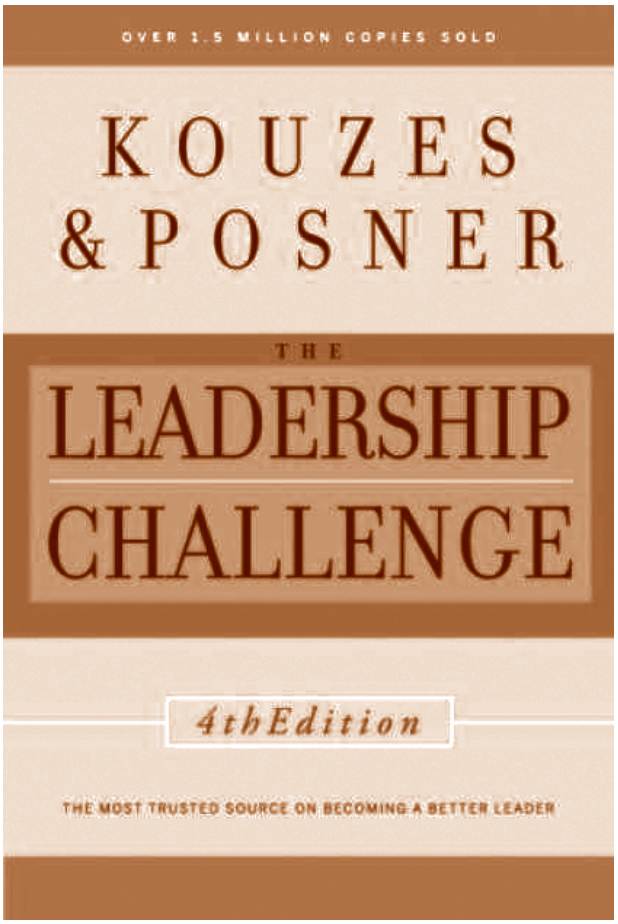
By Adam Bates, Candidate Representative to the Candidate Liaison Committee

In his final column as CAS President, Roger Hayne discussed the need for actuaries to further hone their softer business skills in the November 2010 issue of *The Actuarial Review*. Mr. Hayne suggested broadening the scope of the current exam process beyond the technical to include exams that test for business skills. Whether this makes it to the CAS syllabus of the future or not, the implication is that we, as candidates, should be prepared to continue our professional development beyond the technical nature of the exams and include resources that develop our business and leadership skills. While there are many books on the subject of business and leadership, *The Leadership Challenge*, is one that I have found particularly valuable over the last few years.

Now in its 4th edition, *The Leadership Challenge* by James Kouzes and Barry Posner is a widely respected resource on becoming a better leader. This research-based book examines the characteristics and practices of ordinary people doing extraordinary things and provides practical and practicable ways to become a leader. One particular principle that emerged from their research is that "Leadership is a relationship between those who aspire to lead and those who choose to follow." After all, one can only be a leader if he or she has constituents willing to follow. The authors further espouse that, "Success in leadership, success in business, and success in life has been, is now, and will continue to be a function of how well people work and play together."

Identifying the essence of leadership as a relationship, Posner and Kouzes suggest that credibility is the foundation of that relationship. In three surveys spanning over fifteen years, the authors found that there are consistently four qualities that respondents look for in someone they would willingly follow. Constituents desire their leaders to be honest, forward-looking, competent, and inspiring—with honesty being the single most important characteristic in each survey. The authors suggest that these characteristics and one important prescription aid a leader in establishing credibility with followers. The prescription is, "Do what you say you will do."

The book continues by identifying and discussing each of the "Five Practices of Exemplary Leadership." The first of these encourages leaders to "Model the Way." By modeling the way, leaders clarify their values and set the example. As a leader models the way, he or she can enlist the support of others and begin to "Inspire a Shared Vision," the second practice. Inspiring a shared vision requires the leader to look into the future and paint a picture of what could be and encourage others to take action to get there. The third practice is to



"Challenge the Process." Here, the leader is not content with business-as-usual, but rather looks for opportunities to change, grow, and improve. Subsequently, the leader experiments with the ideas and learns from mistakes along the way. Fourthly, leaders "Enable Others to Act" by fostering collaboration and strengthen their team by sharing power. The authors' research overwhelmingly points to the importance of this practice, stating that they have not found one instance in which a single person could be credited for most, let alone all, of the success of an organization. By empowering others, leaders get power by giving it away. Finally, leaders must "Encourage the Heart." To do so, leaders commit to listening to their constituents and "show appreciation for individual excellence."

Leadership is not just for the CEO or for those in senior management. It is for each of us. Whether we are leading ourselves, or those in our circle of influence, we each have the potential to become a better leader. Although papers by Blanchard, Feldblum, and Friedland are calling, I invite you to complement your actuarial reading with books like *The Leadership Challenge*.

Actuarial Alphabet Soup

from page 4

CPCU – Chartered Property Casualty Underwriter. A professional designation that requires passage of eight exams covering a broad array of topics in property-casualty insurance and risk management. Though this is not an actuarial designation, many actuaries are CPCU holders as well. Since CPCU designees work in virtually all areas of the insurance industry, you will likely encounter them often throughout your career. (www.cpcusociety.org and www.aicpcu.org)

CLC – Candidate Liaison Committee. The CAS committee that brings you *Future Fellows* each quarter and is charged with representing the views of actuarial candidates to the CAS leadership. Admittedly, this isn't a common abbreviation, but who could resist the publicity plug? ff

Resources & Reminders

The CAS Web Site is a valuable resource that includes:

- CAS *Syllabus of Basic Education* and updates
- "Notice of Examinations"
- "Verify Candidate Exam Status" to confirm that joint exams and VEE credits are properly recorded
- "Looking at the Exam Process" series
- Feedback button to the Candidate Liaison Committee
- CAS Regional Affiliates news

EXAM REGISTRATION CONFIRMATION: If you have not received a confirmation of your registration for Exams 3L and 5-9 two weeks prior to the registration deadline, please contact the CAS Office.

REMEMBER YOUR CANDIDATE NUMBER—It is the candidate number of a passing candidate that is first posted online when exam results are available—so keep a record of your candidate number!

Candidate Liaison Committee Mission

The Candidate Liaison Committee communicates with CAS candidates, collectively and individually, who are taking CAS examinations. The committee informs candidates as to appropriate courses of action available to them. Through periodic communication, this committee informs candidates of results of examination administrations, actions taken on complaints received regarding examination questions, and reasons for syllabus and examination changes being implemented. Communication encompasses existing policies and procedures as well as changes being considered. The committee should advise the CAS and its committees of the interests of the candidates regarding matters that come before the CAS and its committees. Candidates may contact the Candidate Liaison Committee at the CAS Office address. The Casualty Actuarial Society is not responsible for statements or opinions expressed in the articles, discussions, or letters printed in *Future Fellows*.

Future FELLOWS

Future Fellows is published four times per year by the Casualty Actuarial Society, 4350 North Fairfax Drive, Suite 250, Arlington, Virginia 22203.

Telephone: (703) 276-3100;
Fax: (703) 276-3108;

E-mail: office@casact.org;
Web Site: www.casact.org.

Presorted Standard postage is paid at Lanham, Maryland.

Subscriptions to the newsletter are complimentary to CAS candidates who registered for a CAS Examination during the previous two years.

For information, please contact the CAS Office. Send all letters to the editor to the CAS Office address.

Postmaster: Please send all address changes to: The Casualty Actuarial Society, 4350 North Fairfax Drive, Suite 250, Arlington, Virginia 22203.

ISSN 1094-169-X

Future FELLOWS
Casualty Actuarial Society
4350 North Fairfax Drive, Suite 250, Arlington, Virginia 22203

FSC LOGO

Fall 2010 Examination Results

Exam Summary

Exam	Number of Candidates	Number of Passing Candidates	Number Below 50% of Pass Mark (Ineffective)	Effective Pass Ratio
1/P*	2127	902	239	47.8%
2/FM*	2499	1177	198	51.2%
3F/MFE*	3232	1140	342	39.4%
3L	198	72	32	43.4%
4/C*	1512	612	154	45.1%
6	945	403	69	46.0%
9	712	262	42	39.1%

*For joint Exams 1/P, 2/FM, 3F/MFE and 4/C, the summary includes all candidates who sat for the specified examination.

Survey Summary

Exam	Percent Responding	Syllabus Coverage *Inadequate (1) to Adequate (5)*	Exam Clarity *Not Clear (1) to Very Clear (5)*	Exam Length *Too Short (1) to Too Long (5)*	Exam Difficulty *Easy (1) to Difficult (5)*	Exam Quality *Poor (1) to Excellent (5)*
3F/MFE	10.98%	2.58	2.40	3.74	4.61	2.22
3L	34.3%	3.64	3.31	3.35	4.12	3.29
6	24.97%	3.76	3.35	3.92	3.79	3.34
9	24.72%	3.70	2.52	3.92	3.86	2.86

*Responses are of total group response. Responses for courses MFE and MLC are based upon the preliminary number of takers.