

# EDUCATION AND EXAMINATION COMMITTEE OF THE SOCIETY OF ACTUARIES (SOA)

FALL 2010

## RETIREMENT BENEFITS—DESIGN AND PRICING (DP), CANADA

### INTRODUCTORY STUDY NOTE

1. The Retirement Benefits—DP, Canada, examination for Fall 2010 will be given on **Thursday, November 4, from 8:30 a.m.–11:45 a.m. and 1:30p.m.–4:45pm.** The examination will consist of 6 hours of written answer questions. A read-through time of 15 minutes will be given prior to the start of the exam.

2. **Learning Objectives**

The candidate should be very familiar with the Learning Objectives. These Learning Objectives describe what is expected from candidates who complete this exam and, therefore, were the first ingredient in developing the syllabus. You will notice that candidates are expected to "analyze," "explain," "calculate," "apply," etc. These skills represent the level of ability that is expected from DP candidates, and exam questions will be established and evaluated with these specific skills in mind. While studying the syllabus material, candidates may want to refer back to the Learning Objectives to remain focused on the goals for the DP exam.

3. In order to attain Fellowship in the SOA in the Retirement Benefits Track, candidates must successfully complete both the Design & Pricing (DP) Exam and the Company Sponsor Perspective (CSP) Exam administered by the SOA. Both of the exams cover topics that are applicable to defined benefit and defined contribution retirement plans, executive benefit plans and retiree health plans. Specific topics included in both the DP and CSP exam cover items such as valuation, plan design, plan funding and investment, practice standards and regulation.

While there are broad retirement topics that have common ground between the DP and CSP exams, the focus of the DP and CSP exams is quite different. The DP exam is intended to cover the basics of: plan design for both broad-based and executive retirement benefit plans, plan valuation, assumption setting, regulation and plan assets held for investment. In the US, portions of these topics are not included on the DP exam, but are rather covered as part of the Enrolled Actuaries examinations.

Many of the topics identified as applicable to the DP exam are also included in the material for the CSP exam. In fact, there are a number of syllabus references that are common to both the DP and CSP exam. The CSP exam, however, is designed to approach these broad retirement topics within the context of a plan sponsor's particular situation, with particular emphasis on the risks associated with a given approach that a sponsor may choose to take. Also, since the publication and management of financial statements is the responsibility of the plan sponsor, the financial statement accounting requirements associated with retirement plans are logically part of the CSP exam syllabus.

To illustrate the different focus of the DP and CSP exams, consider the topic of "hybrid" plan

design. An appropriate DP examination question would be to ask for a description of the unique features of the various forms of hybrid plans, or for a comparison of hybrid plans to traditional defined benefit or defined contribution plans. For the CSP exam, an appropriate question would be to ask for an assessment of the financial risks to plan participants of a hybrid design versus a traditional defined benefit or defined contribution plan, or to ask about specific accounting valuation issues unique to hybrid plans.

The following table shows a recommended FSA module/exam sequence for the Retirement Benefits track:

1	Social Insurance Module
2	Financial Economics Module
3	Design & Pricing (DP) Exam
4	Company Sponsor Perspective (CSP) Exam

This order is NOT mandated. Each candidate will determine the appropriate sequence based on factors including readiness to sit for an exam, exam administration schedules, or study time available. Although neither of the FSA retirement modules nor the DP exam are prerequisites for the CSP exam, please keep in mind that questions for the CSP exam will be set assuming that candidates have a basic familiarity with the general topics and concepts that are covered in the FSA retirement modules and the DP exam.

4. Any changes in the Syllabus for this exam will be published under “Updates” in this exam’s home page on the SOA Web site.

Past exams, solutions and case studies are available at:

<http://www.soa.org/education/exam-req/syllabus-study-materials/edu-multiple-choice-exam.aspx>

5. The Syllabus material includes textbooks, online readings, as well as the study notes listed below. A complete listing of the Syllabus and Learning Objective is located in this exam’s home page on the SOA Web site. Study notes listed with an asterisk (\*) will also be included in the Revision set of study notes.

Code	Title
RC-D11-10*	Introductory Study Note (this study note)
RC-D13-10	Case Study <b>(will be posted on the syllabus page of the web site when available)</b>
R-D100-07	Multiemployer Plans
R-D101-07	Converting Pension Plans from a Defined Benefit to a Defined Contribution Design - Issues to Consider in Canada
R-D103-07	Should Variable Pay Count Towards Benefits Calculations?

Code	Title
R-D104-07	The Globalization of Employee Benefits
R-D105-07	Labor Market Plans
R-D107-07	The European Pensions and Benefits Environment: A Complex Ecology (pp. 47-49 only)
R-D108-07	Pension Challenges and Pension Reforms in OECD Countries
R-D109-07	Financial Economics and Canadian Pension Valuation
R-D110-07	Chapter 3 of <i>Pensions in the Public Sector</i>
R-D112-10*	Selection of Actuarial Assumptions
R-D114-07	An Introduction for Duration for Pension Actuaries
R-D115-07	Reinventing Pension Actuarial Science
R-D117-07	Pension Projections
R-D119-07	Actuarially Equivalent Benefits
R-D120-07	Asset/Liability Modeling and Asset Allocation for Pension Plans
R-D123-07	Chapter 12 of <i>Managing Investment Portfolios</i>
R-D124-07	Introduction and Overview of Retirement Plan Investments
R-D125-09	ASOP 35, Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations
R-D126-09	ASOP 27, Selection of Economic Assumptions for Measuring Pension Obligations
R-D127-09	ASOP 6, Measuring Retiree Group Benefit Obligations
R-D129-09	How the Liability Benchmark is Developed and Used in Practice
R-D130-09	ASOP 23, Data Quality
R-D131-09	Plan Sponsor Guide to Liability–Driven Investing
R-D132-09	Top 10 Myths About Liability Driven Investment
R-D133-09	Chapter 8, Section 6 of <i>Managing Investment Portfolios</i>
R-D134-09	ASOP 2, Recommendations for Actuarial Communications Related to Statements of Financial Accounting Standards Nos. 87 and 88
R-D135-09	ASOP 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions
R-D136-10*	The Trend to a Global TCN Benefits Program for US Companies
R-D137-10*	Discounting State and Local Pension Liabilities

Code	Title
R-D138-10*	Assessment and Selection of Actuarial Assumptions for Measuring Pension Obligations (Chapters 2 & 3)
R-D600-10*	Ontario Pension Benefits Act R.R.O. 1990 Regulation 909
R-D601-07	Canadian Pension Plan Design
R-D602-07	Funding Supplementary Pension Plans
R-D603-07	Securing Supplemental Retirement Arrangements
R-D604-07	Creative Compensation Arrangements for Private Corporations
R-D606-07	Guideline for Converting Plans from Defined Benefit to Defined Contribution
R-D607-07	Pension Surplus and Deficit Funding: Funding of Multi-Employer Plans
R-D608-09	CICA 3461 paragraphs .047 to .065
R-D609-07	Pension Funding Exercises (background only)
R-D610-09	Towers Perrin Summary of Minimum Standards for Phased Retirement Under Registered Pension Plans
R-D611-09	Not Just a Phase
R-D612-10*	Ontario Pension Benefits Act R.S.O. 1990, Chapter P.8
R-D613-09	CIA, Standards of Practice—General Standards 1000–1800
R-D614-09	CIA, Standards of Practice, Practice-Specific Standards for Pension Plans Sec. 3000–3800
R-D615-09	CIA, Standards of Practice, Post-Employment Benefit Plans Sec. 6000–6600
R-D616-09	Executive Compensation

6. Attached are errata for the following textbook:

*Fundamentals of Retiree Group Benefits*, 2006, ACTEX

Errata: [http://www.actexmadriver.com/client/client\\_pages/actex\\_errata2.cfm](http://www.actexmadriver.com/client/client_pages/actex_errata2.cfm)

7. Study Notes R-D600-10 and R-D612-10, entitled “Ontario Pension Benefits Act R.R.O. 1990 Regulation 909” and “Ontario Pension Benefits Act R.S.O. 1990, Chapter P.8”, are included in this package and represents the Pension Benefits Act (Ontario) and Regulations as they existed on January 1, 2010. The exam has been set based on this version of the Act and Regulations.
8. Study Note RC-D13-10 is a case study that will be used as a basis for some questions on the examination. Be sure to answer the questions asked by referring to the case study. For example, if asked for advantages of a particular plan design to a company referenced in the case study, limit your response to the specifics for that company. Other advantages should not be listed as they are extraneous to the question and will result in no additional credit. Further, if they

conflict with the applicable advantages, no credit will be given. Candidates are advised to familiarize themselves with the case study. A copy will be included in the examination booklet. Candidates will not be allowed to bring their study note copy of the case study into the examination room.

9. The pension plan landscape is evolving constantly. Although the syllabus material is the best available material to meet the learning objectives, the material may not refer to the most up-to-date laws, accounting standards or other best practices. Candidates should be aware of any new developments when applying the syllabus material to real-life situations. However, for purposes of the exam, only the syllabus material is tested; any updates to this material which are not included in the syllabus are not required reading for the exam.

A few of the study notes contain introductory pages which identify topics which are affected by recent updates. The following is an additional list of syllabus material which has been affected by recent updates which are not covered in the syllabus (note that this list is not intended to be exhaustive; there may be additional syllabus materials affected by recent updates which are not included in the list):

- R-D100-07: Multi-Employer Plans. This study note was last updated in the year 2000. While the basic principles covered in this note still apply, the comments on p.1 about being well funded, p. 3 about worker shortages, p. 5 about funding, and p. 7 about the unimportance of withdrawal liability are generally not applicable to the current economic environment in 2010 and to the funding regulations after the U.S. Pension Protection Act of 2006 (PPA).
- R-D119-07 – actuarial equivalent benefits. While the principles presented in this paper are still quite applicable, candidates should note there are prescribed methods (not covered in the syllabus) for postponed retirement benefits.
- R-D606-07 – OSFI Policy on conversion. Candidates should note that a DRAFT disclosure guideline for DC pension plan was drafted in September 2009 which could affect the conversion.
- Morneau Sobeco handbook – chapters 3, 8 and 9. This book was last updated in 2008 and candidates should be aware that updated solvency relief regulations are now in effect.
- Towers Watson (formerly Watson Wyatt) handbook chapter 18. The government has proposed pension reform changes that revise the formula for determining excess surplus. The fourth edition of the handbook identifies the revised formula: the “10% of actuarial liabilities” portion of the formula has been increased to “25% of actuarial liabilities”.
- R-D601-07 – Canadian pension plan design. Candidates should note that tax-sheltered retirement saving vehicle TSFA is also available. Please refer to the Morneau Sobeco handbook chapter 12.
- R-D103-07: Should Variable Pay Count Towards Benefits. While the trends and strategy discussed in this reading are still relevant, the compensation limits are out of date and

some of the survey results may be different if the surveys were performed today.

- R-D104-07: The Globalization of Employee Benefits. The inflation data on p. 1270 is not necessarily representative of recent inflation rates. Some of the government benefits described starting on p. 1261 may also have changed. However, the general principles discussed in this article still apply.

## 10. Learning Objectives

The candidate should be very familiar with the Learning Objectives. These Learning Objectives describe what is expected from candidates who complete this exam and, therefore, were the first ingredient in developing the syllabus. You will notice that candidates are expected to "analyze," "explain," "calculate," "apply," etc. These skills represent the level of ability that is expected from DP candidates, and exam questions will be established and evaluated with these specific skills in mind. While studying the syllabus material, candidates may want to refer back to the Learning Objectives to remain focused on the goals for the DP exam.

11. Several book distributors carry some or all of the textbooks for the Society of Actuaries exams. A list appears in on the SOA Web site <http://www.soa.org/education/exam-req/resources/edu-txt-manuals.aspx>. A set of order forms from these distributors is included with this study note package.

The order forms contain information about prices, shipping charges, mailing policy and credit card acceptance. Any book distributor who carries books for SOA exams may have their order form included in this set unless the SOA office receives substantial complaints about service. Candidates should notify the Study Materials Administrator of the SOA in writing if they encounter serious problems with any distributor.

12. The examination questions for this exam will be based on the required readings for this exam. If a conflict exists (in definitions, terminology, etc.) between the readings for this exam and the readings for other exams, the questions should be answered on the basis of the readings for this exam.
13. Candidates may ONLY use the battery or solar-powered Texas Instruments BA-35 model calculator, the BA II Plus\* the BAII Plus Professional\* or TI-30Xa or TI-30X II\* (IIS solar or IIB battery) or TI-30X MultiView (XS solar or XB battery). Candidates may use more than one of the approved calculators during the examinations.

Calculator instructions may not be brought into the exam room. During the exam, the calculator must be removed from its carrying case so the supervisor can confirm that it is an approved model. Candidates using a calculator other than the approved models will have their exams disqualified.

Candidates can purchase calculators directly from: Texas Instruments, Attn: Order Entry, PO Box 650311, Mail Station 3962, Dallas, TX 75265, phone 800/842-2737 or <http://epsstore.ti.com>.

*\*The memory of **TI-30X II**, **TI-30X MultiView**, **BA II Plus** and **BAII Plus Professional** will need to be cleared by the examination supervisor upon the candidate's entrance to the examination room.*

14. Order forms for various seminars/workshops and study manuals are included with this set of

study notes. A list appears on the SOA Web site <http://www.soa.org/education/exam-req/resources/edu-sem-workshops.aspx>. These seminars/workshops and study manuals do not reflect any official interpretation, opinion, or endorsement of the Society of Actuaries or its Education & Examination Committee.

15. The Society of Actuaries provides study notes to persons preparing for this examination. They are intended to acquaint candidates with some of the theoretical and practical considerations involved in the various subjects. While varying opinions are presented where appropriate, limits on the length of the material and other considerations sometimes prevent the inclusion of all possible opinions. These study notes do not, however, represent any official opinion, interpretation or endorsement of the Society of Actuaries. The Society is grateful to the authors for their contributions in preparing study notes.

The American Academy of Actuaries, the Canadian Institute of Actuaries, the Conference of Consulting Actuaries, and the Society of Actuaries jointly sponsor the examinations administered by the Society of Actuaries.