

# Exam RETDAU

## AFTERNOON SESSION

**Date:** Wednesday, April 29, 2020

**Time:** 1:30 p.m. – 3:45 p.m.

### INSTRUCTIONS TO CANDIDATES

#### General Instructions

1. This afternoon session consists of 6 questions numbered 8 through 13 for a total of 40 points. The points for each question are indicated at the beginning of the question.
2. Failure to stop writing after time is called will result in the disqualification of your answers or further disciplinary action.
3. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions on the exam booklet.

#### Written-Answer Instructions

1. Write your candidate number at the top of each sheet. Your name must not appear.
2. Write on only one side of a sheet. Start each question on a fresh sheet. On each sheet, write the number of the question that you are answering. Do not answer more than one question on a single sheet.
3. The answer should be confined to the question as set.
4. When you are asked to calculate, show all your work including any applicable formulas.
5. When you finish, insert all your written-answer sheets into the Essay Answer Envelope. Be sure to hand in all your answer sheets because they cannot be accepted later. Seal the envelope and write your candidate number in the space provided on the outside of the envelope. Check the appropriate box to indicate morning or afternoon session for Exam RETDAU.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

*Canadian version of this exam is recognized by the Canadian Institute of Actuaries.*



**\*\*BEGINNING OF EXAMINATION\*\***

**Afternoon Session**  
***Beginning with Question 8***

- 8.** (6 points) You are asked to perform a five-year accounting projection under U.S. Accounting Standard ASC 715 for a defined benefit pension plan for which you are not the plan actuary. You are given the company's most recent financial statements.
- (a) (3 points) Describe the challenges when using only the company's financial statements to perform the five-year accounting projection.
- (b) (3 points) Compare and contrast the assumptions used to perform an accounting valuation versus an accounting projection.

9. (5 points) Company ABC sponsors a Supplemental Executive Retirement Program (SERP). Management is considering adding an automatic cost of living adjustment (COLA) for all participants effective June 30, 2020.

You are provided the following as of January 1, 2020:

Defined Benefit Obligation prior to adding the automatic COLA	\$14,870,000
Defined Benefit Obligation after adding the automatic COLA	\$17,610,000
Beginning of Year Service Cost prior to adding the automatic COLA	\$1,180,000
Beginning of Year Service Cost after adding the automatic COLA	\$1,350,000
Discount Rate	3.00%
2019 Expected Benefit Payments	\$620,000
Timing of Benefit Payments	Middle of year

Calculate the 2020 Defined Benefit Cost under International Accounting Standard IAS19, Rev. 2011 (IAS 19).

Show all work.

**10.** (7 points)

- (a) (4 points) Describe four risks facing sponsors of post-retirement benefit plans.

Company ABC has amended its post-retirement benefits plan so that only retirees prior to January 1, 2021 are eligible for subsidized benefits.

- (b) (1 point) Explain how future retirees can manage the risk of unexpected healthcare costs.
- (c) (2 points) Propose two ways that Company ABC can help future retirees manage their future healthcare expenses.

Justify your response.

**11.** (6 points)

- (a) (4 points) Describe advantages and disadvantages of offering globally mobile workers an International Pension Plan instead of participating in various local plans from the perspectives of:
  - (i) Employer
  - (ii) Employee
- (b) (2 points) Explain how the disadvantages from the employer perspective identified in part (a) can be addressed.

**12.** (8 points)

- (a) (4 points) Compare and contrast annuity buy-ins and annuity buy-outs from the following perspectives:
- (i) Plan sponsor
  - (ii) Plan participants
- (b) (4 points) Compare and contrast the accounting implications under International Accounting Standards IAS 19, Rev 2011 versus U.S. Accounting Standards ASC 715 of the following transactions:
- (i) Annuity buy-in
  - (ii) Annuity buy-out

No calculations required.

- 13.** (8 points) The municipality of ABC sponsors a defined benefit pension plan with the following provisions:

Employee contributions	50% of normal cost
Normal retirement age	62
Benefit formula	2% of final average pay times years of service
Cost of living adjustment (COLA)	Automatic 3% per year

- (a) (2 points) Describe how the current plan design shares risk between ABC and the following groups:
- (i) Employees
  - (ii) Retirees

ABC is struggling with the volatility of contributions. To further share risk with participants, ABC changed the COLA provision to be equal to inflation with a 4% annual cap.

- (b) (2 points) Critique the effectiveness of this change.
- (c) (4 points) Propose four benefit provision changes that would further share risk with participants based on risk sharing provisions implemented by other public plans in the U.S.

Justify your response.

**\*\*END OF EXAMINATION\*\***  
**Afternoon Session**



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