
SOCIETY OF ACTUARIES
Design & Accounting Exam – Canada

Exam RETDAC

AFTERNOON SESSION

Date: Thursday, April 27, 2017

Time: 1:30 p.m. – 3:45 p.m.

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This afternoon session consists of 5 questions numbered 9 through 13 for a total of 40 points. The points for each question are indicated at the beginning of the question. Questions 10 and 11 pertain to the Case Study, which is enclosed inside the front cover of this exam booklet.
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 RETDAC.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

Tournez le cahier d'examen pour la version française.

CASE STUDY INSTRUCTIONS

The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to 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.

****BEGINNING OF EXAMINATION****
Afternoon Session
Beginning with Question 9

9. (8 points)

- (a) (2 points) Describe the distinguishing features of the following types of multiemployer pension plans (MEPP):
 - (i) Classic MEPP
 - (ii) Public sponsored MEPP
 - (iii) Cooperative MEPP
- (b) (6 points) Compare and contrast the characteristics of a MEPP to a single employer pension plan.

Question 10 pertains to the Case Study.

10. (12 points) Effective January 1, 2018, NOC has amended the Full-Time Salaried and Union Retiree Health Benefit Program. NOC will no longer reimburse retiree claim costs for active employees who have not reached age 55 with at least 10 years of service as of January 1, 2018. Instead, these active employees will receive Health Care Spending Accounts with an annual subsidy of \$2,500 upon retirement. Benefits for other covered groups will remain unchanged.

(a) (4 points) Describe the advantages and disadvantages of Health Care Spending Accounts from both NOC's and their employee's perspective.

The plan change was communicated to employees on July 1, 2017. You are given:

- The discount rate as of July 1, 2017 is 3.50%.
- The change in the Defined Benefit Obligation (DBO) due to the discount rate change as of July 1, 2017 is \$97,000,000.
- There are no other assumption changes.
- There are no other gains or losses.
- Benefit payments from January 1, 2017 to June 30, 2017 are \$30,000,000.
- The change in the DBO and annual service cost as of July 1, 2017 due to the plan changes is as follows (shown at both January 1, 2017 and July 1, 2017 discount rates):

Discount Rate	3.75%	3.50%
Change in the DBO	(\$350,000,000)	(\$365,000,000)
Beginning of period annual service cost before the change	\$108,792,000	\$114,231,000
Change in the beginning of period annual service cost	(\$80,000,000)	(\$83,000,000)

(b) (8 points) Calculate the revised fiscal 2017 Defined Benefit Cost under international accounting standard IAS 19, Rev. 2011 reflecting the plan change.

Show all work.

Question 11 pertains to the Case Study.

- 11.** (8 points) Company ABC wants to implement a defined contribution plan (DC ERP) for its employees in Gevrey. The plan will allow voluntary employee contributions up to 20% of salary and provide matching employer contributions of 50% of employee contributions.
- (a) (2 points) Identify the risks of the proposed plan design, including risks specific to highly-paid and lower-paid plan participants.
 - (b) (3 points) Describe six different ways participants can mitigate risks identified in part (a) above.
 - (c) (3 points) Recommend changes to the plan design that would help participants maximize retirement income.

Justify your response.

12. (5 points) Company XYZ is establishing a non-registered defined contribution plan for executives. Company XYZ's compensation philosophy emphasizes pay for performance and aligns rewards with company revenue growth. A significant portion of executives' pay is variable merit-based lump sum payments and broad-based incentives.

- (a) (2 points) Identify benefits and vesting options for the plan that will achieve the objectives of the compensation philosophy.

Justify your response.

- (b) (3 points) Describe considerations of including or excluding variable pay from the plan benefit formula from the perspective of Company XYZ.

- 13.** (7 points) Company XYZ sponsors a defined benefit pension plan. The actuary for Company XYZ has proposed a discount rate assumption of 3.25% for the 2017 fiscal year end accounting disclosures report under international accounting standard IAS 19, Rev. 2011, based on a bond yield curve approved by Company XYZ's auditing firm.

Company XYZ's management has insisted the actuary prepare the 2017 fiscal year end accounting disclosures based on a 5.50% discount rate.

The actuary completes the report using the 5.50% discount rate.

- (a) (3 points) Describe the rules of the Canadian Institute of Actuaries (CIA) Rules of Professional Conduct that may have been violated by the actuary.
- (b) (3 points) Describe the disclosures that should be contained in a report with respect to economic assumptions based on the Actuarial Standards of Practice No 27.
- (c) (1 point) Describe the qualifying opinion statements the signing actuary should have included in the report for the discount rate assumption.

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

USE THIS PAGE FOR YOUR SCRATCH WORK

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