
SOCIETY OF ACTUARIES
Design & Accounting Exam – U.S.

Exam RETDAU

AFTERNOON SESSION

Date: Thursday, April 30, 2015

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 12 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 RETDAU.
6. Be sure your written-answer envelope is signed because if it is not, your examination will not be graded.

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. (5 points)

- (a) (2 points) Describe the advantages and disadvantages of providing company stock as an investment option in 401(k) plans.
- (b) (3 points) Describe the factors contributing to poor diversification in 401(k) plans from a behavioral finance perspective.

Question 10 pertains to the Case Study.

- 10.** (12 points) NOC has offered an early retirement window to active participants of the National Oil Full-Time Salaried Pension Plan who have attained at least age 50 with 10 or more years of service.

Employees who accept the window will receive both additional service for purposes of determining their accrued benefit and enhanced early retirement reduction factors.

500 employees accepted the early retirement window offer and retire on January 1, 2015.

For the 500 employees who accepted the window you are given:

Projected Benefit Obligation (PBO) prior to window	\$140,000,000
2015 service cost prior to window	\$10,000,000
2015 expected benefit payments prior to window	\$0
PBO with immediate decrement	\$150,000,000
PBO with immediate decrement and enhanced window benefits	\$225,000,000
2015 expected benefit payments with immediate retirement and enhanced window benefits	\$17,000,000

The expected total remaining service lifetime for the following groups:

- All plan participants: 67,000
- All plan participants who accepted the early retirement window: 7,000

Assume that this is a 2015 event and that there are no changes in 2015 expected contributions.

Calculate the revised 2015 Net Periodic Benefit Cost and Accumulated Other Comprehensive Income (AOCI) under U.S. accounting standard ASC 715.

Show all work.

11. (9 points)

- (a) (3 points) Describe the considerations when evaluating whether to finance or fund non-qualified pension plans.
- (b) (4 points) Describe the features of four financing or funding options for non-qualified pension plans.
- (c) (2 points) Describe the considerations in choosing a financing or funding option for non-qualified pension plans.

Question 12 pertains to the Case Study.

12. (9 points) The government of Gevrey is considering increasing the limit on periodic pension payments from \$3,000 to \$4,000 per year for each year of service.

Describe the impact of the increase on each of NOC's pension plans taking into consideration:

- the effect on plan participants;
- plan sponsor options with respect to plan design; and
- accounting implications.

13. (5 points)

- (a) (3 points) Describe the disclosure items to be included in actuarial communications under applicable Actuarial Standards of Practice (ASOPs).
- (b) (2 points) In March 2015, a client asked you to conduct a mortality experience study for its defined benefit pension plan.

Prior to completing the January 1, 2015 actuarial report, the mortality experience study results are completed and indicate that plan members are living significantly longer than expected under the current mortality table.

Describe the implications of the study when completing the actuarial report, taking into consideration applicable professional standards.

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

USE THIS PAGE FOR YOUR SCRATCH WORK

USE THIS PAGE FOR YOUR SCRATCH WORK

USE THIS PAGE FOR YOUR SCRATCH WORK