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

Exam RETDAU

AFTERNOON SESSION

Date: Friday, May 2, 2014

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. Questions 9 and 10 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 8

8. (6 points)

- (a) (4 points) For each of four Precepts of the Code of Professional Conduct of the Society of Actuaries:
- Describe the Precept
 - Provide an example of a breach of the Precept
 - Recommend a course of action to address the breach.
- (b) (2 points) Your client sponsors a collectively bargained pension plan administered by a committee with employee and management representatives and has asked you to join the committee. Describe how you can comply with the Code of Professional Conduct if you join the committee.

Question 9 pertains to the Case Study

9. (6 points) The union is negotiating a change in the NOC Full-Time Hourly Union Pension Plan post-retirement indexing provision and the following options are being considered:

- (i) Increases equal to the change in the Consumer Price Index (CPI) subject to a minimum of 2.5%
- (ii) Cost of living increases equal to the amount that the market rate of return on plan assets exceeds a “hurdle rate” of 8%
- (iii) Non-automatic or discretionary adjustments based upon company performance
- (a) (3 points) Describe the advantages and disadvantages to NOC of each of the proposed options.
- (b) (3 points) Recommend changes to the accounting valuation assumptions for each of the proposed options.

Question 10 pertains to the Case Study

10. (9 points) ABC Pension Plan is a multiemployer plan that has the same plan provisions as the NOC Full-Time Hourly Union Pension Plan (Hourly Pension Plan) except as follows:

- Unreduced pension for participants who are age 55 with at least 30 years of service
- Participants may elect a 100% lump sum payment at retirement
- 100% vesting after 3 years of service
- Disability pension after 10 years of service
- Fewer hours to earn a year of service than the Hourly Pension Plan (NOC employees work 1,500 hours each year)

The union has proposed that NOC should join the ABC Pension Plan. Participating employers are currently required to contribute \$3.50 per hour to the ABC Pension Plan. NOC is considering two options:

Option A: Maintain the current Hourly Pension Plan.

Option B: Merge the Hourly Pension Plan into the ABC Pension Plan and contribute \$3.50 per hour to the ABC Pension Plan. NOC's employees will have past and future benefit accruals based on the ABC Pension Plan provisions.

- (a) (3 points) Describe the risks of joining a multiemployer plan from the perspectives of NOC and NOC's employees.
- (b) (3 points) Describe the additional information required in order to fully evaluate the two options.
- (c) (3 points) Compare and contrast the two options from the perspective of NOC.

- 11.** (5 *points*) ABC Company offers a qualified defined benefit pension plan. ABC's current funding policy is to contribute 125% of the annual minimum required contribution subject to maximum limits. ABC is considering changing their funding policy to contribute the minimum required contribution.
- (a) (2 *points*) Describe the future balance sheet and income statement implications if ABC makes this change.
- (b) (3 *points*) ABC is also considering reducing its 2% of final average earnings formula to a 1.5% of final average earnings formula for future service instead of changing the funding policy. Compare and contrast the two options from the perspective of ABC.

- 12.** (6 points) XYZ Company is a large pharmaceutical company in Gevrey that sponsors a voluntary defined contribution plan (DC Plan). The DC Plan covers medical research staff and laboratory technicians. XYZ is concerned that the DC plan has low participation. You have been provided the following information:

Plan Provisions:

Eligibility	Voluntary enrollment is available once a year
Vesting	100% of account balance after 5 years of service
Employer contributions	Contributions deposited at the end of the year at the following rates: <ul style="list-style-type: none"> • Medical research staff - 2.5% of pay • Laboratory technicians - 1.5% of pay
Member contributions	5% of pay for plan participants
Plan fund investment options	Money market fund
Account balance	Contributions accumulate in member's individual account earning a money market rate of return.
Benefit on retirement or termination	100% of account balance, payable as a lump sum
Benefit on death	Return of employee contributions with interest

Participant Data as of January 1, 2014:

	Average Age	Average Annual Salary
Medical research staff	45	\$90,000
Laboratory technicians	30	\$65,000

Recommend changes to the DC Plan that could increase participation. Justify your response.

- 13.** (8 points) A new company in a hazardous, labor-intensive industry would like to offer a defined benefit pension plan that caters to a young workforce.

Describe four plan provisions you would recommend in designing this company's pension plan. Justify your response.

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

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