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https://www.100test.com/kao_ti2020/84/2021_2022_SOA_E7_9C_9F_E9_A2_98N_c50_84029.htm COURSE 8: Fall 2003 -1- GO TO NEXT PAGERetirement Benefits,Comprehensive Segment U.S.Morning SessionSociety of Actuaries Course 8RU Fall 2003**BEGINNING OF EXAMINATION 8**COMPREHENSIVE SEGMENT U.S.MORNING SESSIONAll Questions pertain to the Case Study1. (7 points) A NOC executive with 30 years of service plans to retire one year from now atage 62. It is important to NOC that the executive transitions to retirement over the nextfour years.(a) Describe the benefit incentives that can be offered to help retain this executive.(b) If you were hired by this executive, provide your recommendation regarding thenegotiation of benefits.(c) Explain how your answer to (a) would be different if the executive had only eightyears of service with NOC.(d) Identify the additional considerations that would exist if, instead of being hired bythe executive, you were hired by NOC to provide advice to the executive.COURSE 8: Fall 2003 -2- GO TO NEXT PAGERetirement Benefits,Comprehensive Segment U.S.Morning SessionAll Questions pertain to the Case Study2. (11 points) On June 30, 2003, NOC purchased a non-participating annuity contract tocover the obligations of all the pensioners in the Full-Time Hourly Union Pension Plan.You are given:#61472.#8226.#61472.As of June 30, 2003, NOC has recorded half of its 2003 pension expense andcontributed half of its 2003 contribution.#61472.#8226.#61472.Valuation results as of June 30, 2003, immediately before the annuity purchase:Using a 6.5%Discount RateUsing a 6.0%Discount Rate(All dollars in 000 ’ s)PBOActive participants $377,000 $400,000Deferred vested participants 0 0Pensioners 103,000 108,000Total PBO $480,000 $508,000Service Cost $24,000 $28,000Market value of assets $320,000 $320,000Average remaining service period 11.5 11.5(a) (5 points) Calculate the pension expense for the year 2003. Show all work.(b) (1 point) Describe the additional considerations if a participating annuity contractwere purchased.(c) (3 points) Explain how your answer to (a) would differ under IAS 19 and therationale for the different requirements.(d) (2 points) Describe the information NOC will have to provide the insurer for thepurpose of obtaining a quote for the annuity contract.COURSE 8: Fall 2003 -3- GO TO NEXT PAGERetirement Benefits,Comprehensive Segment U.S.Morning SessionAll Questions pertain to the Case Study3. (6 points) NOC ’ s Board of Directors has established the following funding policy forNOC ’ s DB ERPs: annual contributions equal to normal cost plus five-year amortizationof unfunded actuarial accrued liability. The CFO of NOC is concerned about thevolatility of funding policy contributions.(a) Explain the effects of different asset valuation methods on this volatility.(b) Explain the effects of different asset class allocations on this volatility.COURSE 8: Fall 2003 -4- GO TO NEXT PAGERetirement Benefits,Comprehensive Segment U.S.Morning SessionAll Questions pertain to the Case Study4. (12 points) The law in Vosne has been changed to permit voluntary employeecontributions of up to 5% of pay to a DC ERP. The tax treatment of these contributionsis the same as for contributions to a PPA.NOC has decided to change the Full- Time Hourly Union Pension Plan from a flat dollarplan to a final average earnings plan, and to add a DC ERP for the union employees.The main provisions of the new plans are:DB ERPNormal retirement benefit: 1% of final five-year average earningstimes years of servicePost retirement indexing: 3% per yearOptional form of benefit: Lump SumThe other provisions of the plan are the same as those in the NOC Full-Time HourlyUnion Pension Plan.DC ERPEmployee Contributions: VoluntaryMatching Employer contributions: 100% match on the first 3% of employeecontributionsForm of Benefit: Lump sum or periodic pension(a) Critique the design of the new plans from the perspective of NOC.(b) Critique the design of the new plans from the perspective of the hourly unionemployees.(c) Assess the current hourly plan asset allocation for the new DB plan.(d) Describe the considerations in setting investment options to be offered toparticipants in the DC ERP.(e) Predict the socio-economic effects of the change in the law in Vosne.COURSE 8: Fall 2003 -5- GO TO NEXT PAGERetirement Benefits,Comprehensive Segment U.S.Morning SessionAll Questions pertain to the Case Study