SOA真题November2005ExamM PDF转换可能丢失图片或格式，建议阅读原文
https://www.100test.com/kao_ti2020/84/2021_2022_SOA_E7_9C_9F_E9_A2_98N_c50_84106.htm Exam M Fall 2005FINAL ANSWER KEYQuestion # Answer Question # Answer1 C 21 E2 C 22 B3 C 23 E4 D 24 E5 C 25 C6 B 26 E7 A 27 E8 D 28 D9 B 29 A10 A 30 D11 A 31 A12 A 32 A13 D 33 B14 C 34 C15 A 35 A16 D 36 A17 D 37 C18 D 38 C19 B 39 E20 B 40 BExam M: Fall 2005 -1- GO ON TO NEXT PAGE**BEGINNING OF EXAMINATION**1. For a special whole life insurance on (x), you are given:(i) Z is the present value random variable for this insurance.(ii) Death benefits are paid at the moment of death.(iii) ( ) 0.02, 0 xt t #1048581.#1048581.micro. τ x t t b gb g= ≥ 0 001 0 . ,(ii) micro.x1 b g is the force of decrement due to death byaccidental means.(iii) δ = 006 .Calculate the single benefit premium for this insurance.(A) 1640(B) 1710(C) 1790(D) 1870(E) 1970Exam M: Fall 2005 -4- GO ON TO NEXT PAGE4. Kevin and Kira are modeling the future lifetime of (60).(i) Kevin uses a double decrement model:x ( )x l τ ( ) 1x d ( ) 2x d60 1000 120 8061 800 160 8062 560 #8722.(ii) Kira uses a non-homogeneous Markov model:(a) The states are 0 (alive), 1 (death due to cause 1), 2 (death due to cause 2).(b) 60 Q is the transition matrix from age 60 to 61. 61 Q is the transition matrixfrom age 61 to 62.(iii) The two models produce equal probabilities of decrement.Calculate 61 Q .(A)1.00 0.12 0.080 1.00 00 0 1.00#9118.#9119.#9119.#9119.#9120.(B)0.80 0.12 0.080.56 0.16 0.080 0 1.00#9118.#9119.#9119.#9119.#9120.(C)0.76 0.16 0.080 1.00

00 0 1.00#9118.#9119.#9119.#9119.#9120.(D)0.70 0.20 0.100 1.00 00 0 1.00#9118.#9119.#9119.#9119.#9120.(E)0.60 0.28 0.120 1.00 00 0 1.00#9118.#9119.#9119.#9119.#9120.Exam M: Fall 2005 -5- GO ON TO NEXT PAGE