

SOA真题November2005ExamM精算师考试 PDF转换可能丢失
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ANSWER KEY Question # Answer Question # Answer
1 C 21 E 2 C 22 B 3 C 23 E 4 D 24 E 5 C 25 C 6 B 26 E 7 A 27 E 8 D 28 D 9 B 29 A 10 A 30 D 11 A 31 A 12 A 32 A 13 D 33 B 14 C 34 C 15 A 35 A 16 D 36 A 17 D 37 C 18 D 38 C 19 B 39 E 20 B 40 B

Exam 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 \text{ xt } t$

#1048581.#1048581.micro. $x \text{ t } t \text{ b } g \text{ b } g = 0 \text{ } 001 \text{ } 0 \text{ } .$, (ii) micro.x1
 $b \text{ g}$ is the force of decrement due to death by accidental means.
(iii) $= 006$. Calculate the single benefit premium for this insurance. (A)

1640 (B) 1710 (C) 1790 (D) 1870 (E) 1970
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4. Kevin and Kira are modeling the future lifetime of (60) .
(i) Kevin uses a double decrement model:
 $x \text{ () } x \text{ l } \text{ () } 1 \text{ x } d \text{ () } 2 \text{ x } d$
 $60 \text{ } 1000 \text{ } 120 \text{ } 80 \text{ } 61 \text{ } 800 \text{ } 160 \text{ } 80 \text{ } 62 \text{ } 560$ #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 matrix from age 61 to 62.
(iii) The two models produce equal probabilities of decrement. Calculate ${}_{61}Q$. (A) $1.00 \text{ } 0.12 \text{ } 0.080 \text{ } 1.00 \text{ } 00 \text{ } 0$

1.00 #9118.#9119.#9119.#9119.#9120. (B) $0.80 \text{ } 0.12 \text{ } 0.080 \text{ } 0.56 \text{ } 0.16$
 $0.080 \text{ } 0 \text{ } 1.00$ #9118.#9119.#9119.#9119.#9120. (C) $0.76 \text{ } 0.16 \text{ } 0.080 \text{ } 1.00$

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
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