



Dr. SNS RAJALAKSHMI COLLEGE OF ARTS AND SCIENCE (Autonomous)

Accredited by NAAC (Cycle-IV) with 'A+' Grade,
(Recognized by UGC & Approved by AICTE, New Delhi and Affiliated to Bharathiar University, Coimbatore)
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Subject: SUPPORTIVE / ALLIED MATHEMATICS-2: BUSINESS CALCULUS AND FINANCIAL COMPUTATION

Code: 21UCR304

QUESTION AND ANSWER

UNIT: 5

1. Find the probability that a male aged 30 will survive for atleast one year?
2. Find the probability that a female aged 30 will survive for atleast 20 years?
3. Find the probability that a female aged 50 will die before age 60?
4. Find the net single premium for a one year term insurance policy of face Rs. 1000 is issued to a male aged 28. Assume $j1=10\%$.
5. A box contains four Rs. 10 bills, six Rs. 5 bills, and three \$1 bills. You are allowed to pull one bill from the box and keep it. What is the expected value of your winnings.
6. Mr. A pays Rs. 10 to enter a betting game. If he can get 3 tails in a row by tossing a fair coin, he wins Rs. 50; otherwise, he loses his Rs. 10. What is his expected gain?
7. Find the probability that a female aged 30 dies between ages 50 and 60?
8. Find the probability that in drawing two cards from a standard deck of 52 cards, I get an ace and a king.
9. Find the discounted expected value of Rs. 50000 to be paid to Mr. Saujani, now aged 30, if he survives to age 65. Let $j1=10\%$.
10. Find the net single premium for a whole life annuity due of Rs. 3000 per year issued to a male now aged 95, using $j1=7\%$.
11. Find the net single premium for a whole life annuity due of Rs. 5000 per year issued to a male now aged 95, using $j1=8\%$.
12. Find the net single premium for a whole life annuity due of Rs. 8000 per year issued to a male now aged 95, using $j1=9\%$.
13. Find the net single premium for an ordinary whole life annuity of Rs. 2000 per annum issued to a male aged 95, if $j1=7\%$.
14. Find the net single premium for an ordinary whole life annuity of Rs. 1000 per annum issued to a male aged 95, if $j1=7\%$.
15. Find the net single premium for an ordinary whole life annuity of Rs. 5000 per annum issued to a male aged 95, if $j1=5\%$.