

Problem 3**BBA (Professional) 2009**

Calculate the net single premium and net annual premium for 5 years endowment policy of Tk 10000 at the age of 30 from the following:

Age	No. of persons insured	No. of death	Present Value of Tk 1.00 @5%
30	9480	125	0.952
31	9355	126	0.907
32	9229	128	0.864
33	9101	130	0.823
34	8971	136	0.784

Solution:

Calculate the NSP and NAP for the 5 years endowment policy

year	age	Number of insured person	Number of Death	Amount of claim	Pv of Tk 1@ 5%	Present Value of Death Claim /PV
1	30	9480	125	10000	0.952	1190000
2	31	9355	126	10000	0.907	1142820
3	32	9229	128	10000	0.864	1105920
4	33	9101	130	10000	0.823	1069900
5	34	8971	136	10000	0.784	1066240
Total Present value of death claim						5574880

Number of living person at the end of 5th year = (8971-136) per
= 8835 person

Total claim of living person = (8835×10000) = Tk. 8,83,50,000

Total PV of living person = (8,83,50,000 × .784)
= 69266400

We know,

$$\begin{aligned} \text{Net single premium (NSP)} &= \frac{\text{Total PV of claim (Death + Living)}}{\text{Total no of insured person}} \\ &= \frac{5574880 + 69266400}{9480} \\ &= \text{TK.7895} \end{aligned}$$