

**281.** For a special investment product, you are given:

- (i) All deposits are credited with 75% of the annual equity index return, subject to a minimum guaranteed crediting rate of 3%.
- (ii) The annual equity index return is normally distributed with a mean of 8% and a standard deviation of 16%.
- (iii) For a random variable  $X$  which has a normal distribution with mean  $\mu$  and standard deviation  $\sigma$ , you are given the following limited expected values:

$E[X \wedge 3\%]$		
	$\mu = 6\%$	$\mu = 8\%$
$\sigma = 12\%$	-0.43%	0.31%
$\sigma = 16\%$	-1.99%	-1.19%

$E[X \wedge 4\%]$		
	$\mu = 6\%$	$\mu = 8\%$
$\sigma = 12\%$	0.15%	0.95%
$\sigma = 16\%$	-1.43%	-0.58%

Calculate the expected annual crediting rate.

- (A) 8.9%
- (B) 9.4%
- (C) 10.7%
- (D) 11.0%
- (E) 11.6%