

**Question #114****Answer: C**

<u>Event</u>	<u>Prob</u>	<u>Present Value</u>
$x = 0$	(0.05)	15
$x = 1$	$(0.95)(0.10) = 0.095$	$15 + 20/1.06 = 33.87$
$x \geq 2$	$(0.95)(0.90) = 0.855$	$15 + 20/1.06 + 25/1.06^2 = 56.12$

$$E[X] = (0.05)(15) + (0.095)(33.87) + (0.855)(56.12) = 51.95$$

$$E[X^2] = (0.05)(15)^2 + (0.095)(33.87)^2 + (0.855)(56.12)^2 = 2813.01$$

$$\text{Var}[X] = E(X^2) - E(X)^2 = 2813.01 - (51.95)^2 = 114.2$$