

282. Aggregate losses are modeled as follows:

- (i) The number of losses has a Poisson distribution with $\lambda = 3$.
- (ii) The amount of each loss has a Burr (Burr Type XII, Singh-Maddala) distribution with $\alpha = 3$, $\theta = 2$, and $\gamma = 1$.
- (iii) The number of losses and the amounts of the losses are mutually independent.

Calculate the variance of aggregate losses.

- (A) 12
- (B) 14
- (C) 16
- (D) 18
- (E) 20