SECTION-3

Ans. 3.

→ P.M.P- It stands for probable maximum precipitation & is defined by N.W.S. by as " theoritically the greatest depth of precipitation for a given duration that is physically possible over a given storm area at a particular geographical location at a certain time of the year".

→ Estimation of P.M.P.: for two successive years will not occure, $(1-P)(1-P) = (1-P)^2$ [P-probability]

using conditional probability for n years.

$$(1-P)^n$$

By using law of total probability

$$J = 1-(1-P)^n. \quad [J-Risk]$$

using binomial distribution for k.

$$\therefore J_k = \frac{n!}{k!(n-k)!} \times (1-P)^{(n-k)} \times p^k$$

Now, $\boxed{J_1 \text{ or more} = 1-(1-P)^n}$