ABSTRACT

The author has considered the problem of recruitment in an organization, which is subjected to reaching the breakdown point due to the exodus of personnel working in the organization and by constructing different mathematical models, she has obtained the expected time to recruitment and cost of recruitment for several univariate and bivariate policies of recruitment, based on the shock model approach.

The author has considered the following univariate and bivariate policies of recruitment:

**POLICY I: CUMT policy**

"The recruitment is made whenever the cumulative loss of manhours exceeds a threshold T, a positive constant."

**POLICY II: MAXM policy**

"The recruitment is made whenever the maximum loss of manhours exceeds a threshold M, a positive constant."

**POLICY III: N-policy**

"The recruitment is made whenever the number of decisions reaches the threshold N, a positive integer."

**POLICY IV: (CUMT, N) policy**

"The recruitment is made whenever the cumulative loss of manhours exceeds the threshold T or the number of decisions reaches N, a positive integer, whichever occurs earlier."

**POLICY V: (A,N') policy**

"The recruitment is made if either (i) the number of threshold crossings reaches N', a positive integer, or (ii) the total remedial time exceeds A, a positive constant, whichever occurs earlier."
POLICY VI: (B,N') policy

"The recruitment is made if either (i) the number of threshold crossings reaches N', a positive integer, or (ii) the total working time exceeds B, a positive constant, whichever occurs earlier."

Based upon the shock model approach, the author has obtained

(i) the expected time to recruitment and the long-run average cost per unit time for the policies I, III and IV.

(ii) the expected time to recruitment and the long-run average reward per unit time for recruitment for the policies V and VI

(iii) the expected time to recruitment for the policy II.

Finally the author has considered the problem of recruitment in an organization with ‘n’ parallel branches and by using the shock model approach, she has obtained the mean time to recruitment. For a better understanding, the author has also given the numerical illustrations, by assuming specific distributions.