APPENDIX No. 13

FORMULAE USED FOR STATISTICAL ANALYSIS

For calculating mean, standard deviation and 't' value desecrate data of these groups following formulas were used:

1. Mean
   \[ \overline{X} = \frac{\Sigma X}{N} \]
   Where \( \overline{X} \) = Mean
   \( \Sigma \) = Sum of
   \( X \) = Scores in a distribution
   \( N \) = Number of scores

2. S.D. (\( \sigma \))
   \[ \sigma = \sqrt{\frac{\Sigma X^2}{N - 1}} \]
   Where \( \sigma \) = Standard Deviation
   \( \Sigma X^2 \) = The sum of \( M \) subtracted from \( X \) score squared \( (X-m)^2 \)
   \( N \) = Number of scores
   \( N-1 \) = Degrees of freedom

3. S.E.D
   \[ SE_D = S.D. \sqrt{\frac{N_1 + N_2}{N_1 \cdot N_2}} \]
   Where \( SE_D \) = Standard Error of Deviation
   S.D. = Standard Deviation
   \( N_1 \) = Number of scores
   \( N_2 \) = Degrees of freedom
4. "t" value

\[ t = \frac{M_1 - M_2}{SE_D} \]

Where \( t \) = 't' value

\( M_1 \) = Mean

\( M_2 \) = Mean

\( SE_D \) = Standard Error of Deviation