# LIST OF TABLES

<table>
<thead>
<tr>
<th>SL. No.</th>
<th>Description</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Overview of Popular Measuring Instruments of Classroom Environment</td>
<td>18-19</td>
</tr>
<tr>
<td>3.1</td>
<td>Scale of Classroom Learning Environment – Item-wise Correlation Coefficient</td>
<td>77</td>
</tr>
<tr>
<td>3.2</td>
<td>Cronbach's Reliability Coefficient Alpha for the Factors of Classroom</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Learning Environment</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Self-Esteem Inventory – Item-wise Correlation Coefficient</td>
<td>84</td>
</tr>
<tr>
<td>3.4</td>
<td>Coefficient Alpha for Self-Esteem Inventory</td>
<td>85</td>
</tr>
<tr>
<td>3.5</td>
<td>Item Analysis Data of Draft Scale of Attitude towards Academic Work</td>
<td>89</td>
</tr>
<tr>
<td>3.6</td>
<td>Blueprint of Test of Achievement in Physical Science</td>
<td>93</td>
</tr>
<tr>
<td>3.7</td>
<td>Data and Results of the Item Analysis of Achievement Test in Physical</td>
<td>95-96</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td></td>
</tr>
<tr>
<td>3.8</td>
<td>Norms for the Scale of Classroom Learning Environment, Self-Esteem Inventory,</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Attitude towards Academic Work, Achievement in Physics, Achievement in</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemistry and Achievement in Physical Science</td>
<td></td>
</tr>
<tr>
<td>3.9</td>
<td>Break Up of the Final Sample</td>
<td>100</td>
</tr>
<tr>
<td>4.1</td>
<td>Important Statistical Constants for the Score Distribution of the</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>Independent and Criterion Variables for the Total Sample (N = 946)</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Important Statistical Constants for the Score Distribution of the</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>Independent and Criterion Variables for Boys (N = 485)</td>
<td></td>
</tr>
<tr>
<td>4.3</td>
<td>Important Statistical Constants for the Score Distribution of the</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>Independent and Criterion Variables for Girls (N = 461)</td>
<td></td>
</tr>
<tr>
<td>4.4</td>
<td>Summary of Three-way ANOVA of Achievement in Physics by Classroom Learning</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>Environment by Sex by School Type (N = 946)</td>
<td></td>
</tr>
<tr>
<td>4.5</td>
<td>Summary of Three-way ANOVA of Achievement in Physics by Achievement</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>Motivation by Sex by School Type (N = 946)</td>
<td></td>
</tr>
</tbody>
</table>
4.6 Summary of Three-way ANOVA of Achievement in Physics by Self-Esteem by Sex by School Type (N = 946)

4.7 Summary of Three-way ANOVA of Achievement in Physics by Attitude towards Science by Sex by School Type (N = 946)

4.8 Summary of Three-way ANOVA of Achievement in Physics by Attitude towards Academic Work by Sex by School Type (N = 946)

4.9 Summary of Three-way ANOVA of Achievement in Chemistry by Classroom Learning Environment by Sex by School Type (N = 946)

4.10 Summary of Three-way ANOVA of Achievement in Chemistry by Achievement Motivation by Sex by School Type (N = 946)

4.11 Summary of Three-way ANOVA of Achievement in Chemistry by Self-Esteem by Sex by School Type (N = 946)

4.12 Summary of Three-way ANOVA of Achievement in Chemistry by Attitude towards Science by Sex by School Type (N = 946)

4.13 Summary of Three-way ANOVA of Achievement in Chemistry by Attitude towards Academic Work by Sex by School Type (N = 946)

4.14 Summary of Three-way ANOVA of Achievement in Physical Science by Classroom Learning Environment by Sex by School Type (N = 946)

4.15 Summary of Three-way ANOVA of Achievement in Physical Science by Achievement Motivation by Sex by School Type (N = 946)

4.16 Summary of Three-way ANOVA of Achievement in Physical Science by Self-Esteem by Sex by School Type (N = 946)

4.17 Summary of Three-way ANOVA of Achievement in Physical Science by Attitude towards Science by Sex by School Type (N = 946)

4.18 Summary of Three-way ANOVA of Achievement in Physical Science by Attitude towards Academic Work by Sex by School Type (N = 946)

4.19 Summary of Three-way ANOVA of Achievement in Physical Science (Physics, Chemistry and Total) by Classroom Learning Environment by Sex by School Type (N = 946)
4.20 Summary of Three-way ANOVA of Achievement in Physical Science (Physics, Chemistry and Total) by Achievement Motivation by Sex by School Type (N = 946)  
147
4.21 Summary of Three-way ANOVA of Achievement in Physical Science (Physics, Chemistry and Total) by Self-Esteem by Sex by School Type (N = 946)  
149
4.22 Summary of Three-way ANOVA of Achievement in Physical Science (Physics, Chemistry and Total) by Attitude towards Science by Sex by School Type (N = 946)  
150
4.23 Summary of Three-way ANOVA of Achievement in Physical Science (Physics, Chemistry and Total) by Attitude towards Academic Work by Sex by School Type (N = 946)  
152
4.24 Summary of the Group Difference in Mean Achievement in Physics for the Three Levels of Self-Esteem  
193
4.25 Summary of the Group Difference in Mean Achievement in Physics for the Three Levels of Attitude towards Science  
195
4.26 Summary of the Group Difference in Mean Achievement in Physics for the Three Levels of Attitude towards Academic Work  
197
4.27 Summary of the Group Difference in Mean Achievement in Chemistry for the Three Levels of Self-Esteem  
199
4.28 Summary of the Group Difference in Mean Achievement in Chemistry for the Three Levels of Attitude towards Science  
201
4.29 Summary of the Group Difference in Mean Achievement in Chemistry for the Three Levels of Attitude towards Academic Work  
203
4.30 Summary of the Group Difference in Mean Achievement in Physical Science for the Three Levels of Self-Esteem  
205
4.31 Summary of the Group Difference in Mean Achievement in Physical Science for the Three Levels of Attitude towards Science  
207
4.32 Summary of the Group Difference in Mean Achievement in Physical Science for the Three Levels of Attitude towards Academic Work  
209
4.33 Summary of Difference in Mean Achievement in Physics of Boys and Girls of Three nearly Identical Groups formed on the Basis of Select Qualitative Variables in Single-sex Schools 212

4.34 Summary of Difference in Mean Achievement in Physics of Boys and Girls of Three nearly Identical Groups formed on the Basis of Select Qualitative Variables in Coeducational Schools 214

4.35 Summary of Difference in Mean Achievement in Physics of Boys of Single-sex Schools and Coeducational Schools – (Three Identical Group of Boys formed on the Basis of Select Qualitative Variables) 216

4.36 Summary of Difference in Mean Achievement in Physics of Girls of Single-sex Schools and Coeducational Schools – (Three Identical Group of Girls formed on the Basis of Select Qualitative Variables) 218

4.37 Summary of Difference in Mean Achievement in Chemistry of Boys and Girls Three nearly Identical Groups Formed on the Basis of Select Qualitative Variables in Single-sex Schools 220

4.38 Summary of Difference in Mean Achievement Chemistry of Boys and Girls Three nearly Identical Groups Formed on the Basis of Select Qualitative Variables in Coeducational Schools 222

4.39 Summary of Difference in Mean Achievement in Chemistry of Boys of Single-sex Schools and Coeducational Schools – (Three Identical Groups of Boys Formed on the Basis of Select Qualitative Variables) 224

4.40 Summary of Difference in Mean Achievement in Chemistry of Girls of Single-sex Schools and Coeducational Schools – (Three Identical Groups of Girls Formed on the Basis of Select Qualitative Variables) 226

4.41 Summary of Difference in Mean Achievement in Physical Science of Boys and Girls of Three nearly Identical Groups Formed on the Basis of Select Qualitative Variables in Single-sex Schools 228

4.42 Summary of Difference in Mean Achievement in Physical Science of Boys and Girls of Three nearly Identical Groups Formed on the Basis of Select Qualitative Variables in Coeducational Schools 230
4.43 Summary of Difference in Mean Achievement in Physical Science of Boys of Single Sex Schools and Coeducational Schools – (Three Identical Groups of Boys Formed on the Basis of Select Qualitative Variables) 232

4.44 Summary of Difference in Mean Achievement in Physical Science of Girls of Single Sex Schools and Coeducational Schools – (Three Identical Groups of Girls Formed on the Basis of Select Qualitative Variables) 234

4.45 Univariate Statistics of Significant Predictor Variables 239

4.46 Pooled Correlation Matrix of the Seven Predictor Variables with Achievement in Physics 241

4.47 Box’s M Test for Equality of Group Variance Matrices 243

4.48 Unstandardised and Standardised Canonical Discriminant Function Coefficients 244

4.49 Group Centroids of the Discriminant Functions for Low – ; Average – ; and High – Achievers in Physics 245

4.50 Statistical Indicators of the Effectiveness of the Discriminant Functions 247

4.51 Confusion Matrix of the Cases Correctly Classified and Misclassified 248

4.52 Pooled Within – Groups Correlations Between Predictor Variables and Canonical Discriminant Functions 250

4.53 Fisher’s Linear Discriminant Function Coefficients of Low – ; Average – ; and High – Achievers in Physics 251

4.54 Univariate Statistics of Significant Predictor Variables 253

4.55 Pooled Correlation Matrix of the Seven Predictor Variables with Achievement in Chemistry 255

4.56 Box’s M Test for Equality of Group Variance Matrices 256

4.57 Unstandardised and Standardised Canonical Discriminant Function Coefficients 257

4.58 Group Centroids of the Discriminant Functions for Low – ; Average – ; and High – Achievers in Chemistry 258
4.59 Statistical Indicators of the Effectiveness of the Discriminant Functions

4.60 Confusion Matrix of the Cases Correctly Classified and Misclassified

4.61 Pooled Within – Groups Correlations Between Predictor Variables and Canonical Discriminant Functions

4.62 Fisher's Linear Discriminant Function Coefficients of Low--; Average --; and High -- Achievers in Chemistry

4.63 Univariate Statistics of Significant Predictor Variables

4.64 Pooled Correlation Matrix of the Seven Predictor Variables with Achievement in Physical Science

4.65 Box's M Test for Equality of Group Variance Matrices

4.66 Unstandardised and Standardised Canonical Discriminant Function Coefficients

4.67 Group Centroids of the Discriminant Functions for Low --; Average --; and High -- Achievers in Physical Science

4.68 Statistical Indicators of the Effectiveness of the Discriminant Functions

4.69 Confusion Matrix of the Cases Correctly Classified and Misclassified

4.70 Pooled Within – Groups Correlations Between Predictor Variables and Canonical Discriminant Functions

4.71 Fisher's Linear Discriminant Function Coefficients of Low --; Average --; and High -- Achievers in Physical Science