## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>S. NO</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declaration</td>
<td>ii</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>iii</td>
</tr>
<tr>
<td>list of tables</td>
<td>x</td>
</tr>
<tr>
<td>list of figures</td>
<td>xv</td>
</tr>
</tbody>
</table>

## CHAPTER I

### INTRODUCTION

1.0 Introduction 1

1.1 The game of Cricket 1

1.2 Different skill forms in Cricket 3

1.3 Requirement of Cricket players 3

1.4 Need of Cricket training 4

1.5 Traditional Cricket training programmes 6

1.6 Need of sports specific training 7

1.7 The importance of sport performance and specificity of training 8

1.8 Sport performance and specificity of training 11

1.9 Background of the study 14

1.9.1 Role of flexibility in sports performance 14

1.9.2 Improvement of the active range of motion 16

1.9.3 Role of physical fitness and sports performance - Fitness for Cricket players 18

1.9.4 Important fitness components for Cricket 19

1.9.5 Physiological need and Cricket performance 20

1.9.6 Importance of psychology in Cricket 21
1.9.7 Mental toughness 22
1.9.8 Self esteem 23
1.9.9 Visual reaction time 25
1.9.10 Muscles associated with playing cricket - Upper body muscles 25
1.9.11 Lower body muscles 26
1.9.12 Strength training 27
1.9.13 Sport-specific strength training 28
1.9.14 Upper body strength training 29
1.9.15 Lower body strength training 31
1.9.16 Plyometric exercise 32
1.9.17 Sports specific plyometric training 33
1.9.18 Upper body plyometric training 34
1.9.19 Lower body plyometric training 36
1.9.20 Plyometric exercise and intensity level 38
1.9.21 Combination of plyometric and strength training 38
1.9.22 Combination of training and its theory 42
1.9.23 Skill movement training 42

1.10 Statement of the problem 43
1.11 Objectives of the study 43
1.12 Significance of the present study 45
1.13 Hypothesis 46
1.14 Delimitations 47
1.15 Limitations 49
1.16 Definition of the technical terms 50
CHAPTER II

REVIEW OF RELATED LITERATURE

2.1 Studies on strength training 56
2.2 Studies on plyometric training 63
2.3 Studies on skill movement training 75
2.4 Studies on combined training 85
2.5 Studies on range of motion variables 90
2.6 Studies on physical variables 98
2.7 Studies on physiological variables 102
2.8 Studies on psychological variables 106
2.9 Studies on performance related variables 114
2.10 Summary of review of literature 116

CHAPTER III

METHODOLOGY

3.1 Selection of the subjects 118
3.2 Selection of variables 119
   3.2.1 Dependent variables 119
   3.2.2 Independent variables 121
3.3 Pilot study 123
3.4 Criterion measures 124
3.5 Orientation of the subjects 126
3.6 Reliability of data 127
   3.6.1 Instruments reliability 127
   3.6.2 Tester’s competency 127
   3.6.3 Subject reliability 129
3.7 Test Administration 129
   3.7.1 Shoulder elevation through abduction test
       (360° universal goniometer) 129
3.7.2 Thoracolumbar spine trunk rotation test 130
3.7.3 Ankle planter flexion test (180° goniometer) 130
3.7.4 50 yard dash 131
3.7.5 Zig Zag – agility test 131
3.7.6 Grip strength 131
3.7.7 Queen’s college - 3 minutes step test 132
3.7.8 Margaria Kalamen power test 132
3.7.9 Skin fold caliper test 133
3.7.10 Mental toughness questionnaire 134
3.7.11 State self – esteem scale 134
3.7.12 Chronoscope visual reaction time test 135
3.7.13 Standing cricket ball throw test 135
3.7.14 Run three 505 agility test 135
3.7.15 Alternate hand wall toss test 137

3.7.16 Training programme 149

3.8 Descriptions of skill movement training exercises 152

3.9 Collection of data 152

3.10 Experimental design statistical technique used 153

CHAPTER IV 155

ANALYSIS AND INTERPRETATIONS OF DATA 155

4.1 Introduction 155
4.2 Level of significance 156
4.3 Test of significance 156
4.4 Discussion on findings 247

4.4.1 Range of motion variables 248
4.4.2 Physical variables 252
4.4.3 Physiological variables 257
4.4.4 Psychological variables 260
4.4.5 Performance related variables 264
4.4.6 Comparison of the training effects 267

4.5 Discussion on hypothesis 271

CHAPTER V 274
SUMMARY, CONCLUSION AND RECOMMENDATIONS 274
5.1 Summary 274
5.2 Conclusions 279
5.3 Recommendations 284

BIBLIOGRAPHY 286
Books 286
Journals and Periodicals 289