# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Content</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table of Content</td>
<td></td>
<td>I-XII</td>
</tr>
<tr>
<td>List of Tables</td>
<td></td>
<td>XIII-XVIII</td>
</tr>
<tr>
<td>List of Graphs/Figures</td>
<td></td>
<td>XIX-XX</td>
</tr>
<tr>
<td>List of Acronyms</td>
<td></td>
<td>XXI-XXII</td>
</tr>
</tbody>
</table>

**CHAPTER-I**

**INTRODUCTION**

1.0 Introduction  1
1.1 Genesis and Development of Consortia  1-2
1.2 Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium  3
1.3 INDEST E-Resources  4
1.4 Statement of the problem  5
1.5 Explanation of the concepts  5
  1.5.1 Use  5
  1.5.2 INDEST  5
  1.5.3 E-Resources  5
  1.5.4 Faculty  5
  1.5.5 Indian Institutes of Technology  5-6
  1.5.6 An Analytical Study  6
  1.5.7 Consortia  6
1.6 Need for the study  6-7
1.7 Scheme of the study  7

**CHAPTER- II**

**REVIEW OF LITERATURE**

2.0 Introduction  8
2.1 INDEST- Consortium  8-14
2.2 Digital Library Consortia in India  14-20
2.3 Networking and Resource Sharing  20-24
2.4 E-Resources and Services  24-31
2.5 Use and Impact of E-resources  31-34
2.6 Management of E-resources  34-38
2.7 Marketing of E-resources 38-39
2.8 Role of librarian and E-resources 39-40
2.9 Evaluation of E-resources 40-44
2.10 Research gap 44

CHAPTER- III
METHODOLOGY

3.0 Introduction 45
3.1 Research Design 45-46
3.2 Objectives of the study 46
3.3 Hypotheses of the study 47
3.4 Scope and Limitation of the Study 47
3.5 Methodology 48
3.6 Data sample 49
3.7 Research Sample 49-50
3.8 Data Collection 50
  3.8.1 Primary data 50-51
  3.8.2 Secondary data collection sources 51
3.9 Statistical techniques used for data analysis 51
  3.9.1 Chi-square Test 51-52
  3.9.2 Correlation 52
  3.9.3 Regression 52
  3.9.4 ANOVA 52
  3.9.5 F Test 53
3.10 Conclusions 53

CHAPTER- IV
PROFILE OF THE SEVEN INDIAN INSTITUTES OF TECHNOLOGY (IIT)

4.0 Introduction` 54-57
4.1 Indian Institute of Technology (IIT), Kharagpur 54-55
  4.1.2 Departments, Centres and Schools in Indian Institute of Technology, Kharagpur 55
  4.1.3 IIT Kharagpur Library 55-56
  4.1.3.1 Central Library 56
  4.1.3.2 Library Timing 56
4.1.3.3 Library Collection (print and e-resources) 56-57

4.2 Indian Institute of Technology (IIT), Bombay 57-60
4.2.1 IIT Bombay Departments, Schools and Centres 57
4.2.2 IIT Bombay library 57-58
4.2.2.1 Library collection 58
4.2.2.2 Library Membership 58
4.2.2.3 Library Working Hours 58
4.2.2.4 Library Holidays 58-59
4.2.2.5 Circulation Hours 59
4.2.3 Services 59-60

4.3 Indian Institute of Technology (IIT), Madras 60-62
4.3.1 IIT Madras Departments and Centres 60
4.3.2 IIT Madras Library 61
4.3.2.1 Library collection 61-62
4.3.2.2 Library Membership 62
4.3.3 Services 62

4.4 Indian Institute of Technology (IIT), Kanpur 63-65
4.4.1 IIT Kanpur Departments, Schools and Centres 63
4.4.2 IIT Kanpur (P K Kelkar Library) Library 63
4.4.2.1 Library Operating Hours 63-64
4.4.2.2 Library Collection 64-65

4.5 Indian Institute of Technology (IIT), Delhi 65-68
4.5.1 Departments and Centers at IIT, Delhi 65
4.5.2 Central library 66
4.5.2.1 Library Working Hours 66-67
4.5.2.2 Library Membership and Loan Privileges 67
4.5.2.3 Library Collection (Print Collection) 67
4.5.2.4 Library E-resources (Electronic library) 67-68

4.6 Indian Institute of Technology (IIT), Guwahati 68-70
4.6.1 Departments and Centers at IIT, Guwahati 68-69
4.6.2 Lakshminath Bezbaroa Central Library 69
4.6.2.1 Membership Information 69
4.6.2.2 Library collections 69-70
4.7 Indian Institute of Technology (IIT), Roorkee 70-73
  4.7.1 Departments and Centers at IIT, Roorkee 70
  4.7.2 Mahatma Gandhi Central Library 71
  4.7.2.1 Library Working Hours and Membership Information 71
  4.7.2.2 Library Collection 71-72
  4.7.2.3 Library Services 72-73
  4.7.2.4 Text Book Loan Scheme 73
  4.7.2.5 Inter Library Loan Scheme 73

CHAPTER V
ANALYSIS AND INTERPRETATION OF DATA

5.0 Introduction 75

5.1 Demographic profile 76-81
  5.1.1 IIT Wise Distribution (Distribution of source data) 76-77
  5.1.2 Gender 77
  5.1.3 Age 78
  5.1.4 Educational Qualifications 79
  5.1.5 Designation 79
  5.1.6 Level of Computer literacy 80
  5.1.7 Summary 81

5.2.0 Awareness and Familiarity with INDEST E-Resources 82-83
  5.2.1 Awareness about INDEST E-Resources 82
  5.2.2 Mode of awareness of INDEST E-Resources 82-83
  5.2.3 Summary 83

5.3.0 Access and Use of INDEST E-Resources 84-100
  5.3.1 Access and use of INDEST E-Resources 84
  5.3.2 Place of Access and Use INDEST E-Resources 85
  5.3.3 Years of Use of INDEST E-Resources 85-86
  5.3.4 Average Time Spent by faculty to access INDEST E- Resources per Week 86-87
  5.3.5 Availability of Important Journals in INDEST-AICTE Consortium 87
  5.3.6 Format Used to download INDEST E-Resources 88
  5.3.7 Components Used in INDEST E-Resources 88-89
  5.3.8 Main Feature Used to search INDEST E-Resources 89
5.3.9 No. of INDEST E-Resources articles read by faculty per week 90
5.3.10 Purpose of using INDEST E-Resources 90-91
5.3.11 Advantages of INDEST E-Resources 91-92
5.3.12 Disadvantages of INDEST E-Resources 92-93
5.3.13 Availability and Accessibility of INDEST E-Resources 93-94
5.3.14 Importance of INDEST E-Resources 94
5.3.15 Reading Pattern of INDEST E-Resources 95
5.3.16 Satisfaction of using INDEST E-Resources 95-96
5.3.17 Facing any problem while using INDEST E-Resources 96-97
5.3.18 Do you recommend INDEST E-Resources to others (students, colleagues, etc.) 97
5.3.19 Do you need to improve your skill to use INDEST E-Resources. 98
5.3.20 Do you need training/orientation for effectively use INDEST E-Resources 98-99
5.3.21 Summary 99-100

5.4.0 Reliability Test for different factors 101-116
5.4.1 Reliability Test Result 101
5.4.2 Rotated Component Matrix 102-104
5.4.3 Basic Advantages of using INDEST E-Resources 105-106
5.4.4 Disadvantages in using INDEST E-Resources 106-107
5.4.5 Augmented Purpose of using INDEST E-Resources 107-108
5.4.6 Availability and Accessibility of INDEST E-Resources 108-109
5.4.7 Limitation of Accessing INDEST E-Resources 109-110
5.4.8 Strength in Accessing INDEST E-Resources network 110-111
5.4.9 Expected Facilitation in accessing INDEST E-Resources 111
5.4.10 Core Purposes of using INDEST E-Resources 112
5.4.11 Value Addition in accessing INDEST E-Resources 112-113
5.4.12 Satisfaction of using INDEST E-Resources 113-114
5.4.13 Summary 115-116

5.5.0 Importance of INDEST E-Resources 117-120
5.5.1 Importance of INDEST E-Resources 117
5.5.2 Reading pattern of INDEST E-Resources by IIT faculty 118
5.5.3 INDEST E-Resources Availability 118-119
5.5.4 Summary 120
### 5.6.0 IIT wise Use of INDEST E-Resources by Faculty of IITs

<table>
<thead>
<tr>
<th>Section Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIT wise Basic Advantages in using INDEST E-Resources</td>
<td>121-123</td>
</tr>
<tr>
<td>IIT wise Disadvantages in accessing INDEST E-Resources</td>
<td>124-126</td>
</tr>
<tr>
<td>IIT wise Augmented Purpose of using INDEST E-Resources</td>
<td>127-129</td>
</tr>
<tr>
<td>IIT wise Availability and Accessibility of INDEST E-Resources</td>
<td>130-132</td>
</tr>
<tr>
<td>IIT wise Limitation of Accessing INDEST E-Resources</td>
<td>133-135</td>
</tr>
<tr>
<td>IIT wise Strength in Accessing INDEST E-Resources</td>
<td>136-138</td>
</tr>
<tr>
<td>IIT wise Expected Facilitation in accessing INDEST E-Resources</td>
<td>139-140</td>
</tr>
<tr>
<td>IIT wise Core Purpose of using INDEST E-Resources</td>
<td>141-142</td>
</tr>
<tr>
<td>IIT wise Value Addition in accessing INDEST E-Resources</td>
<td>143-144</td>
</tr>
<tr>
<td>IIT wise Satisfaction of using INDEST E-Resources</td>
<td>145-148</td>
</tr>
<tr>
<td>IIT wise Importance of INDEST E-Resources</td>
<td>149-150</td>
</tr>
<tr>
<td>IIT wise Reading pattern of INDEST E-Resources by IIT faculty</td>
<td>151-153</td>
</tr>
<tr>
<td>Summary</td>
<td>153-154</td>
</tr>
</tbody>
</table>

### 5.7.0 Designation wise using of INDEST E-Resources by the faculty of IITs

<table>
<thead>
<tr>
<th>Section Description</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designation wise Basic Advantages in using INDEST E-Resources</td>
<td>155-157</td>
</tr>
<tr>
<td>Designation wise Disadvantages in accessing INDEST E-Resources</td>
<td>157-159</td>
</tr>
<tr>
<td>Designation wise Augmented Purpose of using INDEST E-Resources</td>
<td>159-161</td>
</tr>
<tr>
<td>Designation wise Availability and Accessibility of INDEST E-Resources</td>
<td>161-163</td>
</tr>
<tr>
<td>Designation wise Limitation of Accessing INDEST E-Resources</td>
<td>163-164</td>
</tr>
<tr>
<td>Designation wise Strength in Accessing INDEST E-Resources</td>
<td>165-166</td>
</tr>
<tr>
<td>Designation wise Expected Facilitation in accessing INDEST E-Resources</td>
<td>166-167</td>
</tr>
<tr>
<td>Designation wise Core Purpose of using INDEST E-Resources</td>
<td>167-168</td>
</tr>
<tr>
<td>Designation wise Value Addition in accessing INDEST E-Resources</td>
<td>168-169</td>
</tr>
<tr>
<td>Designation wise Satisfaction of using INDEST E-Resources</td>
<td>170-172</td>
</tr>
<tr>
<td>Designation wise Importance of INDEST E-Resources</td>
<td>172-174</td>
</tr>
</tbody>
</table>
5.7.12 Designation wise reading pattern of INDEST E-Resources by faculty
5.7.13 Summary

5.8.0 Age wise Use of INDEST E-Resources by the faculty of IITs

5.8.1 Age wise Basic Advantages in using INDEST E-Resources
5.8.2 Age wise Disadvantages in accessing INDEST E-Resources
5.8.3 Age wise Augmented Purpose of using INDEST E-Resources
5.8.4 Age wise Availability and Accessibility of INDEST E-Resources
5.8.5 Age wise Limitation of Accessing INDEST E-Resources
5.8.6 Age wise Strength in Accessing INDEST E-Resources Network
5.8.7 Age wise Expected Facilitation in accessing INDEST E-Resources
5.8.8 Age wise Core Purpose of using INDEST E-Resources
5.8.9 Age wise Value Addition in accessing INDEST E-Resources
5.8.10 Age wise Satisfaction of using INDEST E-Resources
5.8.11 Age wise Importance of INDEST E-Resources
5.8.12 Age wise reading pattern of INDEST E-Resources by faculty
5.8.13 Summary

5.9.0 Computer Literacy in using INDEST E-Resources by the faculty of IITs

5.9.1 Computer Literacy wise Basic Advantages in using INDEST E-Resources
5.9.2 Computer Literacy wise Disadvantages in accessing INDEST E-Resources
5.9.3 Computer Literacy wise Augmented Purpose of using INDEST E-Resources
5.9.4 Computer Literacy wise Availability and Accessiblity of INDEST E-Resources
5.9.5 Computer Literacy wise Limitation of Accessing INDEST E-Resources
5.9.6 Computer Literacy wise Strength in Accessing INDEST E-Resources Network
5.9.7 Computer Literacy wise Expected Facilitation in accessing INDEST E-Resources

vii
5.9.8 Computer Literacy wise Core Purpose of using INDEST E-Resources 211-212
5.9.9 Computer Literacy wise Value Addition in accessing INDEST E-Resources 212-213
5.9.10 Computer Literacy wise Satisfaction of using INDEST E-Resources` 213-216
5.9.11 Computer Literacy wise Importance of INDEST E-Resources 216-217
5.9.12 Computer Literacy wise reading pattern of INDEST E-Resources by faculty 217-218
5.9.13 Summary 218-219

5.10.0 Factors influencing usage of INDEST E-Resources by IIT faculty members 220-229
5.10.1 Factors by Satisfaction 220-222
5.10.2 Factors by Importance 222-224
5.10.3 Factors by Read Electronic (on monitor) 224-226
5.10.4 Factors by Read Print Out 227-228
5.10.5 Summary 229

5.11.0 Factors affecting INDEST E-Resources usage on level of satisfaction by faculty of top seven IITs 230-234
5.11.1 Model Scores 1 Regression (Factors affecting INDEST Vs Level of Satisfaction) 230-231
5.11.3 Model Scores 2 (Factors affecting INDEST Vs Level of Importance) 232-233
5.11.4 Coefficients (factors affecting INDEST E-Resources usage on level of importance) 233-234
5.11.5 Summary 234

5.12.0 Awareness of INDEST E-Resources among faculty of top seven IITs 235-240
5.12.1 Awareness of INDEST E-Resources by Name of the IIT 235-236
5.12.2 Awareness INDEST E-Resources by Designation 236-237
5.12.3 Awareness INDEST E-Resources by Gender 237-238
5.12.4 Awareness INDEST E-Resources by Age in Years 238
5.12.5 Awareness INDEST E-Resources by Computer Literacy 239
5.12.6 Summary 240
5.13.0 Years of using of INDEST E-Resources among faculty of top seven IITs 241-246

5.13.1 Years of Using by Name of the IIT 241-242
5.13.2 Years of Using by Designation 243
5.13.3 Years of Using by Gender 243-244
5.13.4 Years of Using by Computer Literacy 244-245
5.13.5 Years of Using by Age 245
5.13.6 Summary 246

5.14.0 Format used to download INDEST E-Resources among faculty of top seven IITs 247-252

5.14.1 Format of INDEST E-Resources do you use by Name of the IIT 247-248
5.14.2 Format of INDEST E-Resources do you use by Designation 248-249
5.14.3 Format of INDEST E-Resources do you use by Gender 249
5.14.4 Format of INDEST E-Resources do you use by Age in Years 250
5.14.5 Format of INDEST E-Resources do you use by Computer Literacy 250-251
5.14.6 Summary 251-252

5.15.0 Components of INDEST E-Resources used by faculty of top seven IITs 253-258

5.15.1 Components of INDEST E-Resources by Name of the IIT 253-254
5.15.2 Components of INDEST E-Resources by Designation 255
5.15.3 Components of INDEST E-Resources by Gender 255-256
5.15.4 Components of INDEST E-Resources by Age in years 256-257
5.15.5 Components of INDEST E-Resources by Computer Literacy 257
5.15.6 Summary 258

5.16.0 Features used to search INDEST E-Resources used by faculty of top seven IITs 259-265

5.16.1 Main feature you use when searching INDEST E-Resources by Name of the IIT 259-260
5.16.2 Main feature you use when searching INDEST E-Resources by Designation 261
5.16.3 Main feature you use when searching INDEST E-Resources by Gender 261-262
5.16.4 Main feature you use when searching INDEST E-Resources by Age in Years 262-263

5.16.5 Main feature you use when searching INDEST E-Resources by Computer Literacy 263-264

5.16.6 Summary 264-265

5.17.0 Number of articles from INDEST E-Resources read in a week by faculty of top seven IITs 266-272

5.17.1 Number of articles from INDEST E-Resources do you read in a week by Name of the IIT 266-267

5.17.2 Number of articles from INDEST E-Resources do you read in a week by Designation 268

5.17.3 Number of articles from INDEST E-Resources do you read in a week by Gender 269

5.17.4 Number of articles from INDEST E-Resources do you read in a week by Age in years 269-270

5.17.5 Number of articles from INDEST E-Resources do you read in a week by Computer Literacy 270-271

5.17.6 Summary 271-272

5.18.0 Average time spent in a week on reading articles from INDEST E-Resources by faculty of top seven IITs 273-279

5.18.1 Avg. time do you spend in a week on reading articles from INDEST E-Resources by Name of the IIT 273-274

5.18.2 Avg. time do you spend in a week on reading articles from INDEST E-Resources by Designation 275

5.18.3 Avg. time do you spend in a week on reading articles from INDEST E-Resources by Gender 276

5.18.4 Avg. time do you spend in a week on reading articles from INDEST E-Resources by Age in Years 277

5.18.5 Avg. time do you spend in a week on reading articles from INDEST E-Resources by Computer Literacy 277-278

5.18.6 Summary 278-279

x
5.19.0 Recommendation to use INDEST E-Resources from faculty (students, colleagues, etc.) of top seven IITs

5.19.1 IIT Faculty Recommendation to use INDEST E-Resources to others (students, colleagues, etc.) by Name of the IIT 280-281

5.19.2 IIT Faculty Recommendation to use INDEST E-Resources to others (students, colleagues, etc.) by Name of the IIT by Designation 282

5.19.3 IIT Faculty Recommendation to use INDEST E-Resources to others (students, colleagues, etc.) by Gender 282-283

5.19.4 IIT Faculty Recommendation to use INDEST E-Resources to others (students, colleagues, etc.) by Age in years 283-284

5.19.5 IIT Faculty Recommendation to use INDEST E-Resources to others (students, colleagues, etc.) by Computer Literacy 284

5.19.6 Summary 285

5.20.0 Need to improve skills to use INDEST E-Resources by the faculty of top seven IITs

5.20.1 Need to improve skill in the use of INDEST E-Resources by Name of the IIT 286-287

5.20.2 Need to improve skill in the use of INDEST E-Resources by Designation 288

5.20.3 Need to improve skill in the use of INDEST E-Resources by Gender 288-289

5.20.4 Need to improve skill in the use of INDEST E-Resources by Age in Years 289

5.20.5 Need to improve skill in the use of INDEST E-Resources by Computer Literacy 290

5.20.6 Summary 290-291

5.21.0 Training/orientation need for effectively accessing INDEST E-Resources usage by faculty of top seven IITs

5.21.1 Need training/orientation for effectively accessing INDEST E-Resources by Name of the IIT 292-293

5.21.2 Need training/orientation for effectively accessing INDEST E-Resources by Designation 293

5.21.3 Need training/orientation for effectively accessing INDEST E-Resources by Gender 294
5.21.4 Need training/orientation for effectively accessing INDEST E-Resources by Age in Years 294-295
5.21.4 Need training/orientation for effectively accessing INDEST E-Resources by Age in Years 295
5.21.6 Summary 296

CHAPTER VI
SUMMARY AND CONCLUSION
6.0 Introduction 297
6.1 Issues Studied Under Various Chapters 297
6.2 Findings of the study 298-315
6.3 Recommendations 315
6.4 Suggestions for Further Research 316
6.5 Conclusions 316-317

APPENDICES
References 318-333
Questionnaire
Research Papers Published