5.1 Introduction:

A library is a heart of the college and university. The role of library is challenging in reference to higher education. The library is foundation store in highly educated society. The libraries play a vital role in providing value added education instead of exam centered education. Online education is going to be started in 2000 by British universities with the help of British libraries. The student will get education of various disciplines at home.

To make the libraries well equipped and efficient is a prime requirement for improving the quality of higher education institutions. The libraries should be well organized to satisfy the needs of library-users. The libraries should meet the personality development, research attitude of library user by providing varied services. To make academic programs prospective the libraries have to play an important role and for that networking of libraries are more important.

5.2 Importance of Science and Engineering Education

Science and technical education plays a vital role in human resource development of the country by creating skilled, manpower, enhancing industrial productivity and improving the quality of life. Science and technical education covers courses and programmes in science and engineering, like Microbiology, Zoology, Botany, Technology, Physics, Management, Architecture, Pharmacy, Applied Science, Applied Arts and Crafts, Hotel Management and Catering Technology etc.
The Science and technical education system in the country can be broadly divided into three categories, Central Government Funded Institutions, State Government Funded institutions and Self Financed Institutions.

5.3 Science and Engineering Education: A Scenario

In its much broadcast sense, the discipline of science and engineering is concerned with that body of theory and practice that is relevant to the design and construction of real world artifact arising from human endeavor. Science and Engineering education is not only teaching in basic science, but also realise on training some personal and technical skills, modifying the students way of thinking in a more logical way to archive creativity at the end. The main goal of science and engineering education is to model a creative ethical scientist and engineer in different science and engineering and allied domains.

Successful science and engineering activity requires wide range of skills and knowledge, because the corpus of documented materials relating to science and engineering are now so large, sub-domains of the subject usually have to be considered for examples, electronics, bio-medical, bio-chemical, electrical and so on. Naturally, the fundamental purpose of science and engineering education is to impact relevant skills and knowledge to these people who are interested in gaining either a general awareness of the subject or who wish to become professional scientist and engineer and academic researcher.

5.4 Science and Engineering Education in India

India has the potential to be a global technology leader. Indian economy has been growing at the rate of 9% per year but 6.2% Indian economy growth in 2011-12. The Indian scientific research and industry has also become globally competitive in several sectors and can increase in global market share. A critical factor in this will be the success of the science and technical education system in India with economic growth and the spread of technology, the demand for scientific and engineer have increased manifold. This has been match by an increase in enrollments in science and engineering as well as in number of Science and Engineering institutions in India.
Science education in India is broadly structured into three levels at initial level, graduate level and finally research scholar or scientist. IPR, PRL, DESIDOC, BARC offer research work as a research scholar or scientist and higher degree course in various science disciplines.

Engineering education in India is broadly structured into three levels at the Initial level, Industrial Training Institutions (ITI) offer certificate course then polytechnics offer three years diploma course and finally engineering, NIITS, it offers graduate and higher education degree courses in various engineering disciplines.

Storage has been increasing at a fast speed. The use of computer and other gadgets of Information Technology have now greatly changed the face of libraries. Information system and services are available easily thought the world. The physical from of documents is changed due to the recent development of micrographic technology and optical storage devices like CD-ROM are now available encyclopedia. Every Science and Engineering college library should acquire these devices to meet the major demands of users and space problem in the library.

5.5 Science and Engineering College Libraries Covered in the Study:

There are (160) Grant-in-Aid, Government and Self finance science and engineering college library in Gujarat state, but the study has covered only (90) Grant-in-Aid and Government science and engineering college libraries only, But response received from 66 science and engineering college.

Table: 1

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>University</th>
<th>Science Colleges</th>
<th>Percentage</th>
<th>Engineering Colleges</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>V.N.S.G.U., Surat (Surat Region)</td>
<td>13</td>
<td>19.70</td>
<td>04</td>
<td>6.06</td>
</tr>
<tr>
<td>2</td>
<td>M.S.Uni., Vadodara (Vadodara Region)</td>
<td>---</td>
<td>---</td>
<td>01</td>
<td>1.51</td>
</tr>
<tr>
<td>2</td>
<td>S.P. Uni., V. V. Nagar (V.V.Nagar Region)</td>
<td>02</td>
<td>3.03</td>
<td>01</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td>College Name</td>
<td>Respondents</td>
<td>Science Percentage</td>
<td>Total Respondents</td>
<td>Science Percentage</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------</td>
<td>-------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>3.</td>
<td>Gujarat University, Ahmedabad</td>
<td>16</td>
<td>24.24</td>
<td>05</td>
<td>7.58</td>
</tr>
<tr>
<td></td>
<td>(Ahmedabad Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>North Gujarat University, Patan</td>
<td>06</td>
<td>9.09</td>
<td>02</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>(Patan Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Kachchh University, Kachchh</td>
<td>02</td>
<td>3.03</td>
<td>01</td>
<td>1.52</td>
</tr>
<tr>
<td></td>
<td>(Kachchh Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Dharmsinh Desai University, Nadiad</td>
<td>-</td>
<td>-</td>
<td>01</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>(Nadiad Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Saurastra University, Rajkot</td>
<td>06</td>
<td>9.09</td>
<td>02</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>(Rajkot Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Bhavnagar University, Bhavnagar</td>
<td>02</td>
<td>3.03</td>
<td>02</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>(Bhavnagar Region)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>47</strong></td>
<td><strong>71.21</strong></td>
<td><strong>19</strong></td>
<td><strong>28.79</strong></td>
</tr>
</tbody>
</table>

Above table reveals that 66 science and engineering colleges covered under the research and 47(71.21%) Science colleges responded out of them. Out of 47 science colleges 16(23.88%) are affiliated to Gujarat University 13(19.40%) are affiliated to VNSGU, Surat, North Gujarat University Patan and Saurastra University Rajkot 6(8.96%) respondents each. S.P. University, V.V. Nagar, Krantiguru Shyamji Krishna Verma University Kachchh and Bhavnagar University Bhavnagar 2 (2.98%) respondents each.

The responding Engineering colleges are 19(28.36%), which of 5(7.58%) colleges of Ahmedabad region respondents. Colleges of South Gujarat region are 4(6.06%). North Gujarat, Saurashtra and Bhavnagar region 2(3.03%) respondents each, while contribution as respondents such as Vadodara, V.V. Nagar, Kachchh and Nadiad region in only 1(1.52%) each.
5.5.1 Establishment year of science and engineering colleges in Gujarat:

The colleges covered under this project were established as shown in the following table:

Table: 2

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Year of establishment</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1835-1934</td>
<td>02</td>
<td>3.03</td>
</tr>
<tr>
<td>2.</td>
<td>1935-1944</td>
<td>02</td>
<td>3.03</td>
</tr>
<tr>
<td>3.</td>
<td>1945-1954</td>
<td>06</td>
<td>9.09</td>
</tr>
<tr>
<td>4.</td>
<td>1955-1964</td>
<td>22</td>
<td>33.33</td>
</tr>
<tr>
<td>5.</td>
<td>1965-1974</td>
<td>08</td>
<td>12.12</td>
</tr>
<tr>
<td>8.</td>
<td>1995-2004</td>
<td>07</td>
<td>10.61</td>
</tr>
<tr>
<td>9.</td>
<td>2005 Onwards</td>
<td>03</td>
<td>4.55</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>
Above table reveals that the major colleges and its libraries 22(33.33%) were started during 1955-1964, while during 1965-1974, 1975-84, 1985-94, 8(12.12%) colleges and its libraries were established in each decade. A growth during these three decades was 24(36.36%) colleges and its libraries. A growth of colleges and its libraries in 1995-2004 7(10.61%) and 6(9.09%) during 1945-54. 2(3.03%) colleges and its libraries each in 1835-1934 and 1935-1944, while during 2005 onwards 3(4.55%) colleges and its libraries were established.

5.5.2 Management body of science and engineering colleges:

Table: 3

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Management Body</th>
<th>No. of College</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Education Society</td>
<td>42</td>
<td>63.64</td>
</tr>
<tr>
<td>2.</td>
<td>Public Trust</td>
<td>01</td>
<td>1.52</td>
</tr>
<tr>
<td>3.</td>
<td>Co-Operative Institute</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>4.</td>
<td>Government</td>
<td>20</td>
<td>30.30</td>
</tr>
<tr>
<td>5.</td>
<td>Others</td>
<td>03</td>
<td>4.54</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

112
Chart:  Management body of Science and Engineering Colleges

Above table reveals that most of the colleges 42(63.64%) are managed by education society. A contributions of government as management is 20(30.30%) while only 1(1.52%) college is managed by public trust. The remaining 3(4.54%) colleges are run by other organization.

5.5.3 The following science and engineering college libraries covered in study

(1) Government College of Science

Government college of Science, Vapi Kunta Road, Nani Daman was established with library in 1964. It is run by government, the working hours of the library are 10:00 a.m to 5:00 p.m. during Mondays to Fridays. While on Saturday it runs during 10:00 a.m. to 1:00 p.m. A library remains closed on Sundays and Public holidays. There are 58 members in teaching Staff and 21 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology, zoology, botany and physics are taught at UG level.

(2) B.K.M. Science College

B.K.M. Science College, Tithal Road, Valsad was established with library in 1958. It is run by Education trust, the working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and
Public holidays. There are 38 members in teaching staff and 19 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology and physics are taught at UG level.

(3) **Government Science College**

Government Science College, Chikhli, Dist-Navsari was established with library in 2006. It is run by Education trust, the working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 10 members in teaching staff and 3 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(4) **Shri V.S.Patel College of Science.**

Shri. V.S.Patel College of Science Antalia, Bilimora, Dist. Navsari was started with library facility in 1961. It is run by education trust, the working hours of the library are 11:30 a.m. to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 48 members in teaching staff and 15 members in administrative staff. Subject like mathematics, physics, chemistry and biology are taught at UG and PG level.

(5) **B.P.Baria Science Institute**

B.P.Baria Science Institute, Sayaji Road, Navsari was established with library 1946. It is run by government, the working hours of the library are 11:30 a.m. to 6:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 30 members in teaching staff and 13 members in administrative staff. Subject like microbiology, mathematics, physics, chemistry, biology and botany are taught at UG level.

(6) **Patidar Gin Science College**

Patidar Gin Science College, Sardar Bag, Bardoli was established with library facility in 1963. It is run by Education trust, the working hours of the library are 9:45
a.m. to 5:30 p.m. during Mondays to Fridays, while on Saturdays it runs during 9:45 a.m. to 2:00 p.m. A library remains closed on Sundays and holidays. There are 20 members in teaching staff and 5 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology, zoology and botany are taught at UG level.

(7) **Shri A.N.Shah Science College**

Shri A.N.Shah Science College Kamrej Char Rasta, Navagam Dist. Surat was established with library facility in 1966. It is run by education trust, the working hours of the library are 11:00 a.m. to 5:00 p.m. during Mondays to Fridays, while on Saturdays it runs during 11:00 a.m. to 2:00 p.m. A library remains closed on Sundays and holidays. There are 35 members in teaching staff and 10 members in administrative staff. Subject like microbiology, mathematics, chemistry, physics, zoology and biology are taught at UG level. It also offers chemistry drug subject at PG level.

(8) **Government Science College**

Government Science college, Nava faliya, Valod was established with library facility in 1989. It is run by government, the working hours of the library are 10:30 a.m. to 4:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and holidays. There are 25 members in teaching staff and 18 members in administrative staff. Subject like microbiology, mathematics, physics, chemistry, biology and botany are taught at UG level.

(9) **Navyug Science College**

Navyug Science College, Rander Road, Surat was established with library facility in 1967. It is run by Education trust, the working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 25 members in teaching staff and 20 members in administrative staff. Subject of mathematics, chemistry, physics and biology are taught at UG level.
(10) **Shri P.T. Sarvajanik College of Science**

P.T. Sarvajanik College of Science, Jawaharlal Nehru Marg, Surat was established in 1935. A library of the college was started in the new building in 1938. It is run by Sarvajanik Education Society (Public Trust) the working hours of the library is 10:30 a.m. to 5:00 p.m. during Mondays to Fridays. While on Saturdays it runs during 10:30 a.m. to 3:00 p.m. A library remains closed on Sundays and public holidays.

There are 55 members in teaching staff and 39 members in administrative staff. Subject like microbiology, mathematics, physics, chemistry, biology and botany are taught at UG and PG level. It is the first science college in South Gujarat. It is well known institute for Science education.

(11) **Shri Maharaja Rajendrasinhji Science College.**

Shri Maharaja Rajendrasinhji Science College, Rajpipla, Dist-Narmada was established with library facility in 1984. It is run by Education trust, the working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 21 members in teaching staff and 10 members in administrative staff. Subject like microbiology, chemistry, mathematics, botany and zoology are taught at UG level.

(12) **Narmada College of Science**

Narmada College of Science, Zadeshwar, Bharuch was established with library in 1985. It is run by education trust, the working hours of the library are 10:30 a.m. to 6:10 p.m. during Mondays to Fridays. While on Saturdays it runs during 10:30 a.m. to 2:00 p.m. A library remains closed on Sundays and Public holidays. There are 40 members in teaching staff and 30 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology, botany and physics are taught at UG level. It also offers organic chemistry subject at PG level.
(13) Shri Jayendra Puri Science College

Shri Jayendra Puri Science Colleges, old national Highway No.08 Bholar, Bharuch was established with library in 1955. It is run by Education trust, the working hours of the library are 11:00 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 11:00 a.m. to 1:00 p.m. A library remains closed on Sundays and Public holidays. There are 62 members in teaching staff and 22 members in administrative staff. Subject like microbiology, chemistry, physics, botany, zoology and biology are taught at UG and PG level.

(14) M.B.Patel Science College

M.B.Patel Science College, Near Badikaka Road, Anand was established with library facility in 1978. It is run by Education trust, the working hours of the library are 9.00 a.m. to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 85 members in teaching staff and 35 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(15) V.P. and R.P.T.P. Science College

V.P. and R.P.T.P. Science College, Vallabh Vidyanagar was established with library in 1979. It is run by Education trust, the working hours of the library are 10:30 a.m. to 5:15 p.m. during Mondays to Fridays. While on Saturdays it runs during 10:30 to 2:30 p.m. A library remains closed on Sundays and Public holidays. There are 62 members in teaching staff and 32 members in administrative staff. Subject like microbiology, chemistry, physics, botany, zoology and mathematics are taught at UG and PG level.

(16) Smt. B.C.J. Science College

Smt B.C.J. Science College, Bethak Road, Khabhat was established with library in 1961. It is run by Education Trust, the working hour of the library are 11:00 a.m. to 4:00 p.m. during Mondays to Fridays, while on Saturdays it runs during 8:00 a.m. to 12:30 p.m. A library remain closed on Sundays and Public holidays. There are
28 members in teaching staff and 12 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(17) **Navjivan Science College**

Navjivan Science College, Jhalod Road, Dahod was established with library facility in 1985. It is run by Education trust, the working hour of the library are 11:00 a.m. to 5:00 p.m. during Mondays to Fridays, while on Saturdays it runs during 8:00 a.m. to 12:30 p.m. A library remain closed on Sundays and Public holidays. There are 15 members in teaching staff and 8 members in administrative staff. Subject like microbiology, mathematics, chemistry and physics are taught at UG level.

(18) **R.A.Patel Science College.**

R.A.Patel Science College Bhararam, Borsad Dist.Anand was established with library in 1964. It is run by Education trust, the working hours of the library are 10:30 a.m. to 4:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 26 members in teaching staff and 21 members in administrative staff. Subject like microbiology, chemistry, biology and zoology are taught at UG level.

(19) **Patel J.D.K. Devolwala Science College**

Patel J.D.K. Devolwala Science College, College road, Borsad, Dist.Anand was established with library in 1964. It is run by Public trust, the working hours of the library are 7:30 a.m. to 4:00 p.m. during Mondays to Fridays, while on Saturdays it runs during 7:30 a.m. to 1:30 p.m. A library remains closed on Sundays and Public holidays. There are 23 members in teaching staff and 8 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology, zoology, botany and physics are taught at UG level.

(20) **D.N. Science College**

D.N. Science College, Dabhoi was established with library in 1958. It is run by Education trust, the working hours of the library are 11:00 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays.
There are 30 members in teaching staff and members in administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology, botany and physics are taught at UG and PG level.

(21) Sheth P.T. Science College

Sheth P.T. Science College, Jafribad Godhra was established with library facility in 1960. It is run by Education trust, the working hours of the library are 8:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains close on Sundays and Public holidays. There are 39 members in teaching staff and 11 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(22) Shri R.K. Parikh Science College

Shri R.K. Parikh Science College Petlad, Dist-Anand was established with library facility in 1945-46. It is run by Education trust, the working hours of the library are 11:00 a.m. to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 25 members in teaching staff and 8 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(23) Parekh Brothers Science College

Parekh Brothers Science College, Dakor Road, Kapadwani was established with library facility in 1961. It is run by Education trust, the working hours of the library are 8:00 a.m. to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 12 members in teaching staff and 11 members in administrative staff. Subject like microbiology, chemistry, Botany, zoology and physics are taught at UG level.

(24) J and J College of Science

J and J College of Science, College Road, Nadiad was established with library facility in 1947. It is run by Education trust, the working hours of the library are 10:45 a.m. to 5:15 p.m. during Mondays to Saturdays. A library remains closed on Sundays.
and Public holidays. There are 35 members in teaching staff and 20 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology, physics and botany are taught at UG level and organic chemistry at PG level.

(25) Sheth L.H. Science College

Sheth L.H. Science College, Mansa, Dist, Gandhinagar was established with library facility in 1960. It is run by Education trust, the working hours of the library are 11:00 a.m. to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 20 members in teaching staff and 10 members in administrative staff. It offers the subject like microbiology, mathematics, chemistry, biology and zoology at UG and PG level.

(26) P.H.G. Municipal Science College

P.H.G. Municipal Science College was established with library facility in 1962. It is managed by education trust. The working hours of the library are 7:30 a.m. to 2:30 p.m. during Mondays to Saturdays. There are 39 members in teaching staff and 20 members in administrative staff. It offers the subject like microbiology, mathematics, chemistry, biology and physics at UG level.

(27) K.K. Shah Jarodacala Maninagar Science College.

K.K. Shah Jarodacala Maninagar Science College, J.L. Campus, Besides Rambag, Police station, Maninagar, Ahmedabad was started with library facility in 1975. It is managed by education trust. The working hours of the library are 11:00 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 7:15 a.m. to 1:00 p.m. A library remains closed on Sundays and Public holidays. There are 40 members in teaching staff and 10 members in administrative staff. Subject like microbiology, chemistry, physics, Biology, Botany, zoology and organic chemistry are taught at UG and PG level.

(28) Gujarat College of Science

Gujarat College of Science, Elishbrig, Ahmedabad was established with library facility in 1917. It is run by government. The working hours of the library are
10:30 a.m. to 6:10 p.m. during library Mondays to Fridays. While on Saturdays it runs during 10:30 a.m. to 2:30 p.m. A library remains closed on Sundays and Public holidays. There are 85 members in teaching staff and 15 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology and zoology are taught at UG and PG level. It is the first science college in Gujarat state. It is well known college of Science education.

(29) Bhavan's Sheth R.A.College of Science

Bhavan's Sheth R.A.College of Science, Lady Vidhya, Gauri Nilkanth Marg, Near Karma Hotel, Khanpur, Ahmedabad was established with library facility in 1966. It is run by Education trust. The working hours of the library are 11:00 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains close on Sundays and Public holiday.

There are 32 members in teaching staff and 18 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology and physics are taught at UG level.

(30) C.U. Shah Science College

C.U. Shah Science College, Ashram Road, Ahmedabad was established with library facility in 1965. It is run by education trust. The working hours of the library are 11:30 to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 44 members in teaching staff and 18 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology, zoology and physics are taught at UG level.

(31) R.G. Shah Science College

R.G. Shah Science College, Vasna, Ahmedabad was established with library facility in 1963. It is run by education trust. The working hours of the library are 12:00 a.m. to 5:00 during Mondays to Saturdays. A library remains closed on Sundays and holidays. There are 45 members in teaching staff and 8 members in
administrative staff. Subject like microbiology, mathematics, chemistry, biology, zoology and physics are taught at UG level.

(32) **H.N.S.B. Ltd. Science College**

H.N.S.B. Ltd. Science College, Moripara, Himmatnagar, Dist. Sabarkantha was started with library facility in 1993. It is managed by Education trust. The working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 7:30 a.m. to 12:30 p.m. A library remains closed on Sundays and Public holidays but if demand is there it will be open. There are 15 members in teaching staff and 18 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(33) **Sir P.T. Science College**

Sir P.T. Science College, Dhanshura Road, Modasa was established with library facility in 1960. It is run by Education trust. The working hours of the library are during 10:30 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 8:00 a.m. to 12:30 p.m. A library remains closed on Sundays and Public holidays. There are 18 members in teaching staff and 5 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(34) **Smt. M.G.Panchal Science College**

Smt. M.G. Panchal Science College Pilvai, Vijapur, Dist- Mehsana was started with library facility in 1960. It is managed by education trust. The working hours of the library are 10:30 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 8:00 a.m. to 1:00 p.m. A library remains closed on Sundays and Public holidays. There are 11 members in teaching staff and 10 members in administrative staff. Subject microbiology, mathematics, chemistry, biology and zoology are taught at UG and PG level.
(35) **Drumukhswami Science College**

Drumukhswami Science College, S.V. Campus, Nr. Railway Station, Kadi, Mehsana was started with library facility in 1965. It is managed by Education trust. The working hours of the college library are 7:30 a.m. to 5:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 7:30 a.m. to 12:30 p.m. A library remains closed on Sundays and Public holidays. There are 38 members in teaching staff and 19 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology and zoology are taught at UG and PG level.

(36) **Urban Bank Science College**

Urban Bank Science College, Nagalpur highway, Mehsana was established with library facility in 1964. It is run by Education trust. The working hours of the library are 11:30 a.m. to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and Public holidays. There are 68 members in teaching staff and 42 members in administrative staff. Subject like microbiology, mathematics, chemistry, biology and zoology are taught at UG and PG level.

(37) **Sheth Motilal Nyalchand Science College**

Sheth Motilal Nyalchand Science College, Rajmahal Road, Dist-Patan was established with library facility in 1959. It is run by Education trust. The working hours of the library are 10:30 to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 40 members in teaching staff and 25 members in administrative staff. Subjects like microbiology, mathematics, chemistry, biology and zoology are taught at UG level.

(38) **Tolani College of Science**

Tolani college of Science, Near Railway station, Adipur, Kachchh was established with library facility in 1968. It is run by education trust. The working hours of the library are 7:30 a.m to 6:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 39 members in teaching
staff and 18 members in administrative staff. Subjects like microbiology, mathematic, chemistry, biology and zoology are taught at UG level.

(39) **Shri R.R.Lalan College of Science**

Shri R.R.Lalan College of Science, College Road, Bhuj-Kutch was established with library facility in 1953. It is managed by education trust. The working hours of the library are 10-30 a.m to 5-30 p.m during Mondays to Saturdays. A library remains closed on Sundays and public holydays. There are 35 members in teaching and 23 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology, and zoology at UG level.

(40) **M.D. Science College**

M.D.Science College, Near Kamla Nehrupark, Porbander was established with library facility in 1984. It is managed by education trust. The working hours of the library are 10-30 a.m to 5-30 p.m during Mondays to Saturdays. A library remains closed on Sundays and public holydays. There are 45 members in teaching and 16 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology and zoology at UG level.

(41) **Shri M.P.Shah Science College**

Shri M.P.Shah Science College, Bus Stand Road, Surendranagar was established with library facility in 1955. It is run by public trust. The working hours of the library are 9:30 a.m to 4:30 p.m during Mondays to Fridays. While on Saturdays it runs during 8:00 a.m. to 12:00 p.m. A library remains closed on Sundays and public holidays. There are 35 members in teaching staff and 21 members in administrative staff. Subjects like microbiology, mathematic, chemistry, biology and zoology are taught at UG level.

(42) **Bahauddin Science College**

Bahauddin Science College, College Road, Junagadh was established with library facility in 1984. It is managed by public trust. The working hours of the library are 10-30 a.m to 6-10 p.m during Mondays to Fridays. While on Saturdays it runs
during 10:30 a.m. to 2:00 p.m. A library remains closed on Sundays and public holydays. There are 42 members in teaching and 20 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology and zoology at UG level.

(43) **Shri M and N Virani Science College**

Shri M and N Virani Science College, Yogidhar, Kalawad Road, Rajkot was established with library facility in 1987-88. It is managed by education trust. The working hours of the library are 8-00 a.m to 6-00 p.m during Mondays to Fridays. While on Saturdays it runs during 10:30 a.m. to 2:00 p.m. A library remains closed on Sundays and public holydays. There are 56 members in teaching and 20 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology and zoology at UG and PG level.

(44) **Matrushri Virabhai Mahila Science College**

Matrushri Virabhai Mahila Science College, Opp. Under Bridge, Kalawad Road, Rajkot was established with library facility in 1970. It is run by education trust. The working hours of the library are 10:00 a.m to 5:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 56 members in teaching staff and 20 members in administrative staff. Subjects like microbiology, mathematic, chemistry, biology and zoology are taught at UG and PG level.

(45) **H and H.B.Kotak Institute of Science**

H and H.B.Kotak Institute of Science, Dr.Yagnik Road, P.B.No.54, G.P.O., Rajkot was established with library facility in 1937. It is run by government. The working hours of the library are 11:00 a.m to 5:00 p.m. during Mondays to Fridays. While on Saturdays it runs during 11:00 a.m. to 2:00 p.m. A library remains closed on Sundays and public holidays. There are 44 members in teaching staff and 6 members in administrative staff. Subjects like microbiology, mathematic, chemistry, biology and zoology are taught at UG level.
(46) **Shree Parekh Science College**

Shree Parekh Science College, Mahuva was established with library facility in 1965. It is managed by education trust. The working hours of the library are 11-00 a.m to 5-00 p.m during Mondays to Fridays. While on Saturdays it runs during 8:00 a.m to 12:30 p.m. A library remains closed on Sundays and public holidays. There are 35 members in teaching and 28 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology and zoology at UG level.

(47) **Sir P.P. Institute of Science**

Sir P.P. Institute of Science was established with library facility in 1964. It is managed by public trust. The working hours of the library are 10-30 a.m to 6-10 p.m during Mondays to Fridays. While on Saturdays it runs during 8:30 a.m to 12:30 p.m. A library remains closed on Sundays and public holidays. There are 35 members in teaching and 27 members in administrative staff. It offers the subjects like microbiology, mathematics, chemistry, biology and zoology at UG level.

(48) **Government Engineering College**

Government Engineering College, Near B.K.M.Science College, Thithal Road, Valsad was established with library facility in 2004. It is run by government. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 21 members in teaching staff and 11 members in administrative staff. Subjects like chemical Engineering, mechanical, civil engineering, electrical and Environmental Engineering are taught at UG level.

(49) **S.V.R. Engineering Institute of Technology**

S.V.R. Engineering College, Pipod, Near Parle point, Surat was established with library facility in 1964. It is run by government. The working hours of the library are 9:00 a.m to 8:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 193 members in teaching staff and 62
members in administrative staff. Subjects like mechanical, civil engineering, electrical, computer science, electronics, chemical engineering, Computer Engineering, Information Technology, Automobile Engineering, Electronics and Communication Engineering, Textile Technology, Power Electronics and Production Engineering are taught at UG and PG level.

(50) Government Engineering College

Government Engineering College, Near R.T.O Road, Ring Road, Surat was established with library facility in 2004. It is run by government. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to Fridays. While on Saturdays it runs during 10:30 a.m. to 2:00 p.m. A library remains closed on Sundays and public holidays. There are 47 members in teaching staff and 6 members in administrative staff. Subjects like mechanical, civil engineering, electrical, electronics, chemical engineering and Environmental Engineering are taught at UG and PG level.

(51) Government Engineering College

Government Engineering College, National Highway No.8, Opp. Government Rest house, Bholav, Bharuch was established with library facility in 2004. It is run by government. The working hours of the library are 10:45 a.m to 5:00 p.m. during Mondays to Fridays. While on Saturdays it runs during 10:45 a.m. to 4:00 p.m. A library remains closed on Sundays and public holidays. There are 53 members in teaching staff and 8 members in administrative staff. Subjects like mechanical, civil engineering, electrical, electronics and communication engineering and chemical engineering are taught at UG level.

(52) Faculty of Technology and Engineering, Prof. J.K.Gajjar Library

Faculty of Technology and Engineering, Prof. J.K.Gajjar Library Post Box No.51, Kalabhavan, Vadodara was established in 1890. A library of the college was started in 1910, but present library of the faculty was started in the new building in
1984. It is run by government. The working hours of the library are 8:00 a.m to 10:00 p.m. during Mondays to Sundays. It library also open during Public Holidays on 8.00 a.m. to 10.00 p.m. There are 189 members in teaching staff and 50 members in administrative staff. Subjects like chemical, civil, computer, electrical, electronic, mechanical, metallurgy, textile and textile technology and water management are taught at UG and PG level.

(53) Birla Vishvakarma Mahavidyalaya

Birla Vishvakarma vidyalaya, Vallabh Vidyanagar, Tal- & Dist.Anand was established with library facility in 1948. It is run by education trust. The working hours of the library are 10:30 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 89 members in teaching staff and 21 members in administrative staff. Subjects like mechanical, civil engineering, electrical, computer engineering, electronics and production engineering are taught at UG and PG level.

(54) Government Engineering College

Government Engineering College, Near Pasu Jaivik Sanstha, Sector-28, Gandhinagar was established with library facility in 2004. It is run by government. The working hours of the library are 11:00 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 98 members in teaching staff and 24 members in administrative staff. Subjects like Bio-Medical Engineering, Computer Engineering, Electronic and Communication Engineering, Instrumentation and Control Engineering, Metallurgy Engineering, Mining Engineering and Information Technology are taught at UG and PG level.

(55) Vishwakarma Government Engineering College

Vishwakarma Government Engineering College, Sabarmati Gandhinagar, Highway chandkheda, Dist- Ahmedabad was established with library facility in 1993. It is run by government. The working hours of the library are 10:30 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public
holidays. There are 59 members in teaching staff and 31 members in administrative staff. Subjects like chemical engineering, civil engineering, computer engineering, electrical engineering, electronics and communication, information technology, instrumentation and control, mechanical engineering and power electronics are taught at UG and PG level.

(56) Government Engineering College

Government Engineering College, Jalod Road, Dahod was established with library facility in 2005. It is run by government. The working hours of the library are 10:30 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 49 members in teaching staff and 23 members in administrative staff. Subjects like mechanical, civil engineering, electrical, computer engineering, electronics and communication engineering are taught at UG level.

(57) Government Engineering College

Government Engineering College, Government polytechnic, Near civil Hospital Godhara was established with library facility in 2004. It is run by government. The working hours of the library are 10:30 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 41 members in teaching staff and 21 members in administrative staff. Subjects like mechanical, civil engineering, electrical, electronics and communication engineering are taught at UG level.

(58) L.D. Engineering College

L.D. Engineering College, Opp.Gujarat University, Ahemedabad was established with library facility in 1948. It is run by government. The working hours of the library are 10:00 a.m to 8:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 325 members in teaching staff and 85 members in administrative staff. Subjects like Automobile, Bio-Medical, Chemical, Civil, Computer, Electrical, Electronic and Communication,
Environmental, Information Technology, Instrumentation and Control, Mechanical, Plastic Technology, Rubber Technology and Textile Technology are taught at UG and PG level.

(59) **Government Engineering College**

Government Engineering College, Modasa was established with library facility in 1994. It is run by government. The working hours of the library are 10:45 a.m to 5:45 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 52 members in teaching staff and 18 members in administrative staff. Subjects like civil engineering, computer engineering, electrical engineering, electronics and communication, information technology, mechanical engineering and automobile engineering are taught at UG and PG level.

(60) **Government Engineering College**

Government Engineering College, At & Post Katpur, Dist- Patan was established with library facility in 2004. It is run by government. The working hours of the library are 10:30 a.m to 6:00 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 39 members in teaching staff and 21 members in administrative staff. Subjects like mechanical, civil engineering, electrical engineering, computer science and engineering, electronics and communication engineering are taught at UG level.

(61) **Government Engineering College**

Government Engineering College, Mirzapur Road, Jubilee Grounds, Katchchh, bhuj was established with library facility in 1994. It is run by government. The working hours of the library are 10:30 a.m to 5:30 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 21 members in teaching staff and 18 members in administrative staff. Subjects like mechanical, civil engineering, electrical, electronics & communication engineering, chemical engineering, mining engineering and environment engineering are taught at UG level.
(62) Faculty of Technology, Dharamsinh Desai University

Faculty of Technology Dharamsinh Desai University, College Road, Nadiad was established with library facility in 1964. It is run by education trust. The working hours of the library are 8:30 a.m to 8:30 p.m. during Mondays to Fridays. While on Saturdays it runs during 8:30 a.m. to 12:30 p.m. A library remains closed on Sundays and public holidays. There are 250 members in teaching staff and 38 members in administrative staff. Subjects like Chemical Engineering, Civil Engineering, Computer Engineering, Electronic and Communication Engineering and Instrumentation and Control Engineering are taught at UG and PG level.

(63) Lukhdhirji Engineering College

Lukhdhirji Engineering College, Morbi, Rajkot was established with library facility in 1975. It is run by government. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to 1st, 3rd and 5th Saturdays. A library remains closed on 2nd and 4th Saturdays and Sundays and public holidays. There are 129 members in teaching staff and 39 members in administrative staff. Subjects like mechanical, civil engineering, electrical engineering, Chemical Engineering, Industrial Engineering, Information Technology, Power Electronics and Production engineering are taught at UG level.

(64) Shantilal Shah Engineering College

Shantilal Shah Engineering College, Sidsar Campus, Vartej Dist-Bhavnagar was established with library facility in 1983. It is run by Education Trust. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 55 members in teaching staff and 30 members in administrative staff. Subjects like mechanical, civil engineering, electrical, electronics and communication engineering, information technology, instrumentation and control engineering, marine engineering and production engineering are taught at UG and PG level.
(65) Government Engineering College

Government Engineering College, Media, Kankot Road, Near Hanuman Mandir, Near Krishna Nagar Village, Rajkot was established with library facility in 2004. It is run by government. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to 1\textsuperscript{st}, 3\textsuperscript{rd} and 5\textsuperscript{th} Saturdays. A library remains closed on 2\textsuperscript{nd} and 4\textsuperscript{th} Saturdays and Sundays and public holidays. There are 90 members in teaching staff and 21 members in administrative staff. Subjects like Civil Engineering, Electronics and Communication Engineering, Instrumentation and Control Engineering, Mechanical Engineering Meterlargy Engineering and Automobile Engineering are taught at UG and PG level.

(66) Government Engineering College

Government Engineering College, BPIT Campus, Vidyanagar, Bhavnagar was established with library facility in 2004. It is run by Education Trust. The working hours of the library are 10:30 a.m to 6:10 p.m. during Mondays to Saturdays. A library remains closed on Sundays and public holidays. There are 35 members in teaching staff and 19 members in administrative staff. Subjects like mechanical, civil engineering, electronics and communication engineering, production engineering, information technology and computer engineering are taught at UG level.

Above all colleges are covered in the study and collected data for the research