

C. CRITERIA-WISE INPUTS

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

1.1.1 How are the institutional vision and mission reflected in the academic programmes of the university?

Annamalai University located in a rural setting in Tamil Nadu has since its inception in 1929 aimed at providing access to higher education in all fields of knowledge to thousands of students from across the country. The curriculum is designed and implemented taking cognizance of the educational policies of the State and Central Government, and the global needs, while serving the cause of national development and regional requirements. The syllabus is dynamic and is constantly revamped to keep pace with the rapid developments in various fields of study, scientific and technological advancements, and to meet the demands of academia, industry and society. The University offers academic programmes in both the conventional face-to-face and the distant mode of education thereby reaching out to a wide spectrum of students across the globe. The culture of academic freedom and flexibility provides immense scope for introducing innovations in the curriculum to achieve the institutional vision and mission of striving for academic excellence.

1.1.2 Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

The design and development of the curriculum is a democratic process with all the faculty contributing to the introduction, innovation, and revision of the syllabi. The curriculum is designed fully adhering to the guidelines of the UGC and other national and state academic organizations. The syllabus is organized in a logical sequence, progressing from basic concepts to more complex themes and latest developments in a graded manner. The syllabus is designed to provide a comprehensive coverage of the subject with emphasis on fundamentals as well as applied aspects. After elaborate discussions on the content and organization of the syllabus in the respective Boards of Studies, the decisions taken are implemented through the Faculty and Academic Council.

The Choice Based Credit System (CBCS) introduced in 2000 provides flexibility to introduce innovative and interdisciplinary programmes, revise the syllabus in tune with the changing demands of the industry and society, in addition to offering a range of optional and elective courses for the students. Improvements in the CBCS over a period of time lent a greater degree of flexibility while ensuring uniform credit structure based on the recommendations of Tamil Nadu State Council for Higher Education (TANSCHÉ). Each programme is defined in terms of credits that in turn reflect the quantum of syllabus and the number of hours of teaching per week. A minimum of 90 credits is prescribed of which 70 are for core courses, 16 for optionals/electives, and 4

credits for soft skills such as computer applications, communication skills, and personality development.

Periodic changes in the curriculum are made based on societal needs that provide a thrust for national development. Current trends in the job market are also considered while framing the syllabus. Feedback from faculty, academic peers, experts from industry, current students and alumni is used in the initiation, review, and redesign of curricula. The feedback obtained from Central and State governments as well as research organizations in India and overseas also help to design and modify the curriculum.

1.1.3 How are the following aspects ensured through curriculum design and development?

*** Employability**

The curriculum design through an equitable proportion of hands-on practical training for skill acquisition and sound theoretical knowledge serves to equip the students to face real-time situations and societal needs. The curriculum attempts to address the needs of various stakeholders such as industries, Government agencies, banking sector, farming corporates, major agro-based industries, insurance sector, etc.

*** Innovation**

The University gives a great deal of academic freedom enabling the introduction of new and innovative courses. The University with 49 departments of study under one roof provides the right ambience for introducing several innovative interdisciplinary programmes.

*** Research**

The Pre-final and Final year Undergraduate students in professional programmes are oriented to research through participation in minor and major projects. In many of the PG programmes offered by all the faculties, research is included as a mandatory course in the final year.

1.1.4 To what extent does the university use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the university been instrumental in leading any curricular reform which has created a national impact?

The recommendations of the regulatory bodies are given vital importance while framing the curriculum. The University follows the Choice Based Credit System (CBCS) and semester pattern. The university over the years has introduced new need-based programmes of study and revised the curricula to suit the needs of society and the local and global demands. The curricula developed by the University is well regarded in academic circles and has also been followed by other institutions.

1.1.5 Does the university interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the university benefitted through interactions with the stakeholders?

The university interacts with industry, research institutes and civil society in the curriculum revision process. The Boards of Studies in several departments comprise experts from industry and research institutes as members. In addition, industrialists and scientists who visit the university for conferences and workshops share their rich experience in suggesting changes and improvements in the curriculum to meet the changing demands of a dynamic world.

1.1.6 Give details of how the university facilitates the introduction of new programmes of studies in its affiliated colleges.

Not Applicable

1.1.7. Does the university encourage its colleges to provide additional skill-oriented programmes relevant to regional needs? Cite instances (not applicable for unitary universities).

Not Applicable

1.2 Academic Flexibility

1.2.1 Furnish the inventory for the following: * Programmes taught on campus

FACULTY OF INDIAN LANGUAGES

| POSTGRADUATE PROGRAMMES | |
|-------------------------------------|---|
| M. A. | 1. Tamil 2. Hindi 3. Sanskrit 4. Linguistics |
| FIVE YEAR INTEGRATED PROGRAMMES | |
| | Tamil |
| P.G. DIPLOMA PROGRAMMES | |
| | 1. Lexicography 2. Natural Language Processing 3. Phonetics |
| M.Phil., Ph.D. & D.Litt. PROGRAMMES | |
| | 1. Tamil 2. Hindi 3. Sanskrit 4. Linguistics |

FACULTY OF ARTS

| UNDERGRADUATE PROGRAMMES | | | | | | | | | | | | | | | | | |
|--|---|----------------------------|--------------------------|----------------------------------|-------------------------------|----------------------------|--|------------|---------------------------|--|------------------------|------------------------------------|---------------------------|------------------------------|-----------------------|--|---------------|
| UG | B.L.I.S. (1 Year) | | | | | | | | | | | | | | | | |
| POSTGRADUATE PROGRAMMES (CBCS) | | | | | | | | | | | | | | | | | |
| M.A. | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Applied Economics</td> <td style="width: 50%;">8. History</td> </tr> <tr> <td>2. Development Studies</td> <td>9. Philosophy</td> </tr> <tr> <td>3. Economics</td> <td>10. Philosophy, Culture and Tourism.</td> </tr> <tr> <td>4. English</td> <td>11. Political Science</td> </tr> <tr> <td>5. English Literature & American Studies</td> <td>12. Population Studies</td> </tr> <tr> <td>6. Gandhian Studies</td> <td>13. Public Administration</td> </tr> <tr> <td>7. Health and Social Science</td> <td>14. Rural Development</td> </tr> <tr> <td></td> <td>15. Sociology</td> </tr> </table> | 1. Applied Economics | 8. History | 2. Development Studies | 9. Philosophy | 3. Economics | 10. Philosophy, Culture and Tourism. | 4. English | 11. Political Science | 5. English Literature & American Studies | 12. Population Studies | 6. Gandhian Studies | 13. Public Administration | 7. Health and Social Science | 14. Rural Development | | 15. Sociology |
| 1. Applied Economics | 8. History | | | | | | | | | | | | | | | | |
| 2. Development Studies | 9. Philosophy | | | | | | | | | | | | | | | | |
| 3. Economics | 10. Philosophy, Culture and Tourism. | | | | | | | | | | | | | | | | |
| 4. English | 11. Political Science | | | | | | | | | | | | | | | | |
| 5. English Literature & American Studies | 12. Population Studies | | | | | | | | | | | | | | | | |
| 6. Gandhian Studies | 13. Public Administration | | | | | | | | | | | | | | | | |
| 7. Health and Social Science | 14. Rural Development | | | | | | | | | | | | | | | | |
| | 15. Sociology | | | | | | | | | | | | | | | | |
| M.Com | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Accounting and Finance</td> <td style="width: 50%;">4. Entrepreneurship</td> </tr> <tr> <td>2. Accounting and Taxation</td> <td>5. International Banking</td> </tr> <tr> <td>3. Computer Applications</td> <td></td> </tr> </table> | 1. Accounting and Finance | 4. Entrepreneurship | 2. Accounting and Taxation | 5. International Banking | 3. Computer Applications | | | | | | | | | | | |
| 1. Accounting and Finance | 4. Entrepreneurship | | | | | | | | | | | | | | | | |
| 2. Accounting and Taxation | 5. International Banking | | | | | | | | | | | | | | | | |
| 3. Computer Applications | | | | | | | | | | | | | | | | | |
| M.B.A | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Dual Specialization HRM</td> <td style="width: 50%;">2. Environmental Studies</td> </tr> <tr> <td>3. Marketing Mgt, Financial Mgt.</td> <td>4. International Business Mgt</td> </tr> </table> | 1. Dual Specialization HRM | 2. Environmental Studies | 3. Marketing Mgt, Financial Mgt. | 4. International Business Mgt | | | | | | | | | | | | |
| 1. Dual Specialization HRM | 2. Environmental Studies | | | | | | | | | | | | | | | | |
| 3. Marketing Mgt, Financial Mgt. | 4. International Business Mgt | | | | | | | | | | | | | | | | |
| M.S.W | Master of Social Work | | | | | | | | | | | | | | | | |
| M.L.I.S. | Master of Library & Information Science: 1. One Year 2. Two Year | | | | | | | | | | | | | | | | |
| FIVE YEAR INTEGRATED PROGRAMMES | | | | | | | | | | | | | | | | | |
| MA | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Applied Economics</td> <td style="width: 50%;">4. History</td> </tr> <tr> <td>2. Applied Sociology</td> <td>5. Political Science</td> </tr> <tr> <td>3. English & Communication</td> <td>6. Population and Development Philosophy</td> </tr> <tr> <td></td> <td>7. Rural Management</td> </tr> </table> | 1. Applied Economics | 4. History | 2. Applied Sociology | 5. Political Science | 3. English & Communication | 6. Population and Development Philosophy | | 7. Rural Management | | | | | | | | |
| 1. Applied Economics | 4. History | | | | | | | | | | | | | | | | |
| 2. Applied Sociology | 5. Political Science | | | | | | | | | | | | | | | | |
| 3. English & Communication | 6. Population and Development Philosophy | | | | | | | | | | | | | | | | |
| | 7. Rural Management | | | | | | | | | | | | | | | | |
| MHSS | 1. Master of Health and Social Sciences | | | | | | | | | | | | | | | | |
| M.Phil., Ph.D., & D.Litt. Programmes | | | | | | | | | | | | | | | | | |
| | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Business Administration</td> <td style="width: 50%;">7. Philosophy</td> </tr> <tr> <td>2. Commerce</td> <td>8. Political Science</td> </tr> <tr> <td>3. Economics</td> <td>9. Population Studies</td> </tr> <tr> <td>4. English</td> <td>10. Public Administration</td> </tr> <tr> <td>5. History</td> <td>11. Sociology</td> </tr> <tr> <td>6. Library and Information Science</td> <td></td> </tr> </table> | 1. Business Administration | 7. Philosophy | 2. Commerce | 8. Political Science | 3. Economics | 9. Population Studies | 4. English | 10. Public Administration | 5. History | 11. Sociology | 6. Library and Information Science | | | | | |
| 1. Business Administration | 7. Philosophy | | | | | | | | | | | | | | | | |
| 2. Commerce | 8. Political Science | | | | | | | | | | | | | | | | |
| 3. Economics | 9. Population Studies | | | | | | | | | | | | | | | | |
| 4. English | 10. Public Administration | | | | | | | | | | | | | | | | |
| 5. History | 11. Sociology | | | | | | | | | | | | | | | | |
| 6. Library and Information Science | | | | | | | | | | | | | | | | | |

FACULTY OF SCIENCE

PostGraduate Programmes

| | | |
|--------------|--|---|
| M.Sc. | <ol style="list-style-type: none"> 1. Biochemistry 2. Biotechnology 3. Botany 4. Chemistry 5. Environmental Biotechnology | <ol style="list-style-type: none"> 6. Geology 7. Mathematics 8. Microbiology 9. Physics 10. Statistics with Computer Applications 11. Zoology |
|--------------|--|---|

Five Year Integrated Programmes

| | | |
|--------------|--|---|
| M.Sc. | <ol style="list-style-type: none"> 1. Bioinformatics 2. Biotechnology 3. Botany 4. Chemistry 5. Environmental Biotechnology 6. Geology | <ol style="list-style-type: none"> 7. Herbal Science 8. Mathematics 9. Microbiology 10. Physics 11. Statistics with Computer Applications 12. Zoology |
|--------------|--|---|

M.Phil, Ph.D. & D.Sc. Programmes

| | |
|--|--|
| <ol style="list-style-type: none"> 1. Applied Geology 2. Biochemistry 3. Biotechnology 4. Bioinformatics 5. Botany 6. Chemistry 7. Environmental Biotechnology 8. Geoinformatics | <ol style="list-style-type: none"> 9. Geology 10. Herbal Science 11. Mathematics 12. Microbiology 13. Physics 14. Plant Biology & Biotechnology 15. Statistics 16. Zoology |
|--|--|

FACULTY OF MARINE SCIENCE

M.Sc., M.Phil., Ph.D. & D.Sc. PROGRAMMES

1. Coastal Aquaculture
2. Marine Biology & Oceanography
3. Marine Biotechnology
4. Marine Food Technology
5. Marine Microbiology

Five Year Integrated Programmes

| | |
|--------------|----------------------------|
| M.Sc. | Ocean Science & Technology |
|--------------|----------------------------|

FACULTY OF ENGINEERING AND TECHNOLOGY

| UNDERGRADUATE PROGRAMMES | | |
|---|--|---|
| BE (Full-time & Part-time) | 1. Chemical Engineering 2. Civil Engineering 3. Civil and Structural Engineering 4. Computer Science and Engineering 5. Electrical and Electronics Engineering | 6. Electronics and Communication Engineering 7. Electronics and Instrumentation Engineering 8. Information Technology 9. Manufacturing Engineering 10. Mechanical Engineering |
| B. Pharm. | | |
| DIPLOMA PROGRAMME | | |
| | D. Pharm. | |
| POSTGRADUATE PROGRAMMES | | |
| ME (Full-time & Part-time) | 1. Chemical Engineering 2. Computer Science and Engineering 3. Construction Engineering & Management 4. Disaster Mgt & Engineering 5. Energy Engineering and Mgt. 6. Environmental Engineering 7. Geotechnical Engineering | 8. Manufacturing Engineering 9. Nano Materials and Surface Engineering 10. Power Systems Engineering 11. Process Control and Instrumentation Engineering 12. Structural Engineering 13. Thermal Power Engineering 14. Water Resources Engineering and Management. |
| M.Tech. (Full-time & Part-time) | | |
| M.C.A. | Computer Applications | |
| M.Pharm. | 1. Industrial Pharmaceutical Chemistry 2. Industrial Pharmacology 3. Industrial Pharmacy | 4. Pharmacology 5. Pharmacy Practice 6. Quality Assurance |
| M.Sc. (2 years) | 1. Software Engineering 2. Information Technology | |
| M.S. | Quality Assurance and Regulatory Affairs | |
| INTEGRATED PROGRAMMES | | |
| M.Sc. (5 years) | 1. Food Processing Technology 2. Industrial Biotechnology 3. Industrial Safety Engineering | |
| Pharm. D. (6 Years Integrated) | | |
| Pharm. D. (3 Years Post Bacalaureate) | | |
| Ph. D. & D.Sc. | | |
| | 1. Chemical Engineering 2. Civil Engineering 3. Computer Science & Engineering 4. Electrical Engineering | 5. Instrumentation Engineering 6. Manufacturing Engineering 7. Mechanical Engineering 8. Pharmacy 9. Structural Engineering |

FACULTY OF EDUCATION

| UNDERGRADUATE PROGRAMMES | |
|---------------------------------|--|
| B.Ed. | 1. Bachelor of Education |
| B.P.E. | 2. Bachelor of Physical Education |
| B.P.Ed. | 3. Bachelor of Physical Education |
| Diploma | 1. Diploma in Physical Education (D.P.Ed.) 2. Gym Instructor 3. Yoga |
| P.G. Diploma | 1. Adult & Continuing Education [Part Time] 2. Gym Instructor 3. Yoga |
| POSTGRADUATE PROGRAMMES | |
| M.Ed. | 1. Master of Education |
| M.P. Ed. | 2. Master of Physical Education |
| M.A. | 3. Adult & Continuing Education |
| M.Sc. | 4. Applied Psychology 5. Yoga |
| FIVE YEAR INTEGRATED PROGRAMMES | |
| M.Sc. | Clinical Psychology |
| | M.Phil., Ph. D. & D.Litt. |
| | 1. Education 2. Psychology 3. Physical Education 4. Lifelong Learning Education 5. Clinical Psychology |

FACULTY OF FINE ARTS

| TITLE PROGRAMMES & POSTGRADUATE DIPLOMA COURSES | |
|---|--|
| Isaikalaimani | Vocal, Veena, Violin, Flute, Miruthangam, Thavil, Nagaswaram |
| Thevara Isaikalaimani | Thevaram, Nattiyakalaimani, Bharathanatyam |
| PG Diploma Isaichelvamani | Vocal, Veena, Violin, Flute, Miruthangam, Thavil, Nagaswaram |
| Nattuvangakalaimani | |
| Nattuvangam | |
| T.T.C in Music | |
| UNDERGRADUATE PROGRAMMES | |
| 1. B. Music. | Vocal, Veena, Violin, Flute, Miruthangam, Thavil, Nagaswaram |
| 2. B. Dance | Bharathanatyam |
| POSTGRADUATE PROGRAMMES | |
| M. Music | Vocal, Veena, Violin, Flute, Miruthangam |
| M. Dance | Bharathanatyam |
| M.Phil. & Ph. D. PROGRAMMES | |
| M.Phil. | 1. Music 2. Dance |
| Ph. D. | 1. Music 2. Dance |

FACULTY OF FINE ARTS - OVERSEAS PROGRAMMES

| Title Programmes & Courses | |
|---------------------------------|--|
| Isaikalaimani | Vocal, Veena, Violin, Flute, Miruthangam |
| Nattiyakalaimani | Bharathanatyam |
| Certificate Courses | Vocal, Veena, Violin, Flute, Miruthangam |
| UNDERGRADUATE PROGRAMMES | |
| 1. B. Music | Vocal, Veena, Violin, Miruthangam, |
| 2. B. Dance | Bharathanatyam |
| POSTGRADUATE PROGRAMMES | |
| 1. M. Music | Vocal, Veena, Violin |
| 2. M. Dance | Bharathanatyam |

FACULTY OF AGRICULTURE

| UNDERGRADUATE PROGRAMMES | | |
|---|---|--|
| B.Sc. | 1. B.Sc. Agriculture | |
| B.Sc. | 2. B.Sc. Horticulture | |
| POSTGRADUATE PROGRAMMES [Full-time & Part-time] | | |
| M.Sc. (Agriculture) | 1. Agricultural Biotechnology 2. Agricultural Economics 3. Agricultural Extension 4. Agricultural Microbiology 5. Agronomy 6. Entomology 7. Genetics and Plant Breeding 8. Microbial Biotechnology 9. Plant Pathology 10. Seed Science & Technology 11. Soil Science & Agricultural Chemistry | |
| M.Sc. | 1. Horticulture | |
| M.B.A. | 1. Agri Business Management | |
| Ph. D. & D.Sc. PROGRAMMES | 1. Agricultural Chemistry 2. Agricultural Economics 3. Agricultural Extension 4. Agronomy 5. Entomology 6. Genetics and Plant Breeding 7. Horticulture 8. Microbiology 9. Plant Pathology 10. Seed Science and Technology 11. Soil Science | |

FACULTY OF DENTISTRY

| UNDERGRADUATE PROGRAMMES | | |
|--|--|--|
| B.D.S. | Bachelor of Dental Surgery | |
| POSTGRADUATE (M.D.S.) & Ph.D. PROGRAMMES | | |
| | 1. Conservative Dentistry and Endodontics 2. Oral Medicine & Radiology 3. Oral Pathology & Microbiology 4. Oral Surgery 5. Orthodontics & Dentofacial Orthopaedics 6. Pedodontics 7. Periodontics 8. Prosthodontics | |
| DIPLOMA PROGRAMMES | 1. Dental Mechanics 2. Dental Hygienist | |

FACULTY OF MEDICINE

| UNDERGRADUATE PROGRAMMES | | | | | | | | | | | | | | | |
|--|---|------------------------|----------------|-----------------|----------------|--------------|------------------------------|-----------------|---------------------|-----------------|-----------------|-----------------------|---------------------------|---------------------|---------------------|
| 1. M.B.B.S. | | | | | | | | | | | | | | | |
| 2. B.P.T. | | | | | | | | | | | | | | | |
| 3. B.Sc. | Nursing | | | | | | | | | | | | | | |
| POSTGRADUATE AND Ph.D. PROGRAMMES | | | | | | | | | | | | | | | |
| M.D. | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. Anatomy, Physiology</td> <td style="width: 50%;">8. Paediatrics</td> </tr> <tr> <td>2. Biochemistry</td> <td>9. Anaesthesia</td> </tr> <tr> <td>3. Pathology</td> <td>10. Obstetrics & Gynaecology</td> </tr> <tr> <td>4. Microbiology</td> <td>11. Radio-Diagnosis</td> </tr> <tr> <td>5. Pharmacology</td> <td>12. Dermatology</td> </tr> <tr> <td>6. Community Medicine</td> <td>13. Venereology & Leprosy</td> </tr> <tr> <td>7. General Medicine</td> <td>14. PMR, Psychiatry</td> </tr> </table> | 1. Anatomy, Physiology | 8. Paediatrics | 2. Biochemistry | 9. Anaesthesia | 3. Pathology | 10. Obstetrics & Gynaecology | 4. Microbiology | 11. Radio-Diagnosis | 5. Pharmacology | 12. Dermatology | 6. Community Medicine | 13. Venereology & Leprosy | 7. General Medicine | 14. PMR, Psychiatry |
| 1. Anatomy, Physiology | 8. Paediatrics | | | | | | | | | | | | | | |
| 2. Biochemistry | 9. Anaesthesia | | | | | | | | | | | | | | |
| 3. Pathology | 10. Obstetrics & Gynaecology | | | | | | | | | | | | | | |
| 4. Microbiology | 11. Radio-Diagnosis | | | | | | | | | | | | | | |
| 5. Pharmacology | 12. Dermatology | | | | | | | | | | | | | | |
| 6. Community Medicine | 13. Venereology & Leprosy | | | | | | | | | | | | | | |
| 7. General Medicine | 14. PMR, Psychiatry | | | | | | | | | | | | | | |
| M.S. | <ol style="list-style-type: none"> 1. General Surgery 2. Ophthalmology 3. Otorhinolaryngology 4. Orthopaedics | | | | | | | | | | | | | | |
| M.P.T. | <ol style="list-style-type: none"> 1. Cardio-Respiratory 2. Neurological Condition 3. Orthopaedic Condition 4. Paediatric Condition 5. Sports Physiotherapy | | | | | | | | | | | | | | |
| M.Sc. NURSING | <ol style="list-style-type: none"> 1. Community Nursing 2. Medical and Surgical 3. Obstetrics & Gynaecology 4. Paediatrics | | | | | | | | | | | | | | |
| DIPLOMA & OTHER PROGRAMMES | | | | | | | | | | | | | | | |
| Post Graduate Diploma | <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1. D.C.H</td> <td style="width: 50%;">5. D.O</td> </tr> <tr> <td>2. D.A.</td> <td>6. D.L.O</td> </tr> <tr> <td>3. D.G.O</td> <td>7. DMRD</td> </tr> <tr> <td>4. D.Ortho</td> <td>8. DDVL</td> </tr> </table> | 1. D.C.H | 5. D.O | 2. D.A. | 6. D.L.O | 3. D.G.O | 7. DMRD | 4. D.Ortho | 8. DDVL | | | | | | |
| 1. D.C.H | 5. D.O | | | | | | | | | | | | | | |
| 2. D.A. | 6. D.L.O | | | | | | | | | | | | | | |
| 3. D.G.O | 7. DMRD | | | | | | | | | | | | | | |
| 4. D.Ortho | 8. DDVL | | | | | | | | | | | | | | |
| UNDERGRADUATE & DIPLOMA PROGRAMME IN NURSING | | | | | | | | | | | | | | | |
| UG-Diploma | Nursing | | | | | | | | | | | | | | |

1.2.2. Give details on the following provisions with reference to academic flexibility

a. Core / Elective options -

The curriculum in almost all the programmes comprises three components relating to core, elective, and practical courses along with research component in the final year. The core courses emphasize on fundamental aspects together with design methodologies and throw open avenues for applications. Students are offered elective courses in their own departments and also by other departments of study. In order to encourage interdisciplinary participation, it is mandatory for students to enroll for one elective course every semester outside their department. The students have the freedom to choose from a stream of elective courses. The list of elective courses is regularly updated. Students also have the additional flexibility of combining the conventional programmes with short-term courses in the distance mode of education.

The proportional partitioning of core and elective courses and other skill oriented courses is tabled below.

| Faculty | Programmes | Core | Credits | | |
|---------------------|-------------------------|------|----------|------------------------------------|-------|
| | | | Elective | Research/ Enrichment Courses | Total |
| Arts | M.A. (CBCS) | 65 | 16 | 9 | 90 |
| | M.A. (Integ.) | 137 | - | 17 | 154 |
| | M.B.A. | 52 | 16 | 22 | 90 |
| Science | M.Sc. (CBCS) | 66 | 20 | 4 | 90 |
| | M.Sc. (Integ.) | 133 | 21 | - | 154 |
| Marine Sciences | M.Sc. (CBCS & Integ.) | 64 | 16 | 10 | 90 |
| Indian Languages | M.A. (CBCS) | 70 | 16 | 4 | 90 |
| | M.A. (Integ.) | 134 | 12 | 6 | 152 |
| Engineering & Tech. | B.E. | 164 | 20 | 16 | 200 |
| | M.E. | 22 | 24 | 19 | 65 |
| Education | M.Sc. (Psychology) | 60 | 12 | - | 72 |
| | M.P.Ed. | 70 | 16 | 4 | 90 |
| | M.A. Life Long Learning | 74 | 16 | - | 90 |
| Agriculture | B.Sc. (Ag./Hort.) | 132 | 21 | 3 | 156 |
| | M.Sc. (Ag./Hort.) | 18 | 18 | 17 | 53 |

b. Enrichment courses -

The curricula of both the professional undergraduate and postgraduate programmes include enrichment courses that enable the students to adapt to the needs of stakeholders. The enrichment courses include allied subjects, soft skill courses such as communication and computer applications, managerial skills and industrial visits.

a. Courses offered in modular form –

The syllabus for each course in a large number of programmes is drawn up in a modular fashion with each sub-module pertaining to a specific aspect of study and each sub-module in turn related to each other.

b. Credit accumulation and transfer facility

The credit transfer facility is in existence for student exchange programmes wherever there is an MoU between this University and an institution elsewhere either in India or abroad. Credit transfer has been initiated with Tennessee Tech University, USA.

c. Lateral and vertical mobility within and across programmes, courses and disciplines

The university does offer lateral mobility in selected programmes in the sense it allows students of one programme to pursue courses in related programmes and credit the same to qualify for the degree. With regard to vertical mobility, students are permitted to simultaneously pursue distance mode advanced programmes to enable them to qualify for both during the same timeframe.

1.2.3 Does the university have an explicit policy and strategy for attracting international students?

Yes. The University allows overseas students to pursue programmes through a special quota system. A significant number of students enrol in a variety of programmes to pursue their career prospects. The curriculum does meet the requirements of such student in terms of employability and suitability to work in their own countries on their return. The University permits international students to visit as “observers” and credit internships in selective programmes. International Students Welfare Bureau and International Students Hostel are also available to serve foreign students. The Foreign Students admitted in various faculties during the last 5 years are given below.

| Faculty | Admitted | | | | | |
|--------------------------|-----------|------------|------------|------------|------------|------------|
| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| Arts | 12 | 92 | 98 | 123 | 86 | 81 |
| Science | 1 | 16 | 16 | 20 | 16 | 9 |
| Marine Sciences | 2 | 0 | 0 | 0 | 0 | 0 |
| Indian Languages | 2 | 1 | 0 | 3 | 1 | 1 |
| Engineering & Technology | 1 | 20 | 21 | 22 | 37 | 39 |
| Education | 4 | 3 | 3 | 6 | 7 | 5 |
| Fine Arts | 6 | 5 | 11 | 11 | 11 | 7 |
| Agriculture | 0 | 0 | 0 | 3 | 1 | 4 |
| Medicine | 0 | 3 | 1 | 1 | 0 | 0 |
| Dentistry | 0 | 1 | 0 | 0 | 0 | 1 |
| Total | 28 | 141 | 150 | 189 | 159 | 147 |

1.2.4 Have many courses been developed targeting international students? If so, how successful have they been? If 'no', explain the impediments.

The University offers programmes to suit opportunities and requirements of subjects concerned at the global level. It infuses a degree of relevance to attract foreign students by providing the necessary impact in the syllabi of different courses.

The Table herein details the number of international students enrolled in various programmes offered by different department of study over the six-year timeframe.

| Department offering the Programme | Admitted | | | | | |
|-----------------------------------|----------|---------|---------|---------|---------|---------|
| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| English | 0 | 3 | 0 | 0 | 0 | 0 |
| Political Science | 1 | 6 | 6 | 38 | 3 | 8 |
| Economics | 2 | 29 | 33 | 38 | 25 | 26 |
| Sociology | 0 | 0 | 3 | 2 | 1 | 5 |
| Commerce | 4 | 14 | 22 | 14 | 19 | 18 |
| Centre for Population Studies | 3 | 36 | 31 | 19 | 14 | 8 |
| Business Administration | 2 | 2 | 1 | 3 | 6 | 5 |
| Philosophy | 0 | 2 | 0 | 1 | 8 | 5 |
| Centre for Rural Development | 0 | 0 | 2 | 8 | 10 | 6 |
| Mathematics | 0 | 1 | 1 | 0 | 0 | 0 |
| Statistics | 1 | 13 | 12 | 11 | 11 | 3 |
| Chemistry | 0 | 0 | 0 | 0 | 0 | 1 |
| Zoology | 0 | 2 | 1 | 3 | 2 | 0 |
| Earth Sciences | 0 | 0 | 1 | 0 | 2 | 3 |
| Biochemistry & Biotechnology | 0 | 0 | 1 | 6 | 1 | 2 |
| CAS in Marine Sciences | 2 | 0 | 0 | 0 | 0 | 0 |
| Tamil Studies & Research | 0 | 1 | 0 | 0 | 0 | 1 |
| CAS in Linguistics | 2 | 0 | 0 | 3 | 1 | 0 |
| Civil Engineering | 0 | 0 | 0 | 0 | 3 | 5 |
| Civil & Structural Engineering | 0 | 0 | 1 | 0 | 0 | 3 |
| Electrical & Electronics Engg. | 0 | 5 | 7 | 0 | 1 | 3 |
| Computer Science & Engineering | 1 | 15 | 13 | 18 | 7 | 16 |
| Pharmacy | 0 | 0 | 0 | 4 | 26 | 12 |
| Education | 1 | 0 | 0 | 0 | 0 | 0 |
| Psychology | 0 | 0 | 2 | 5 | 4 | 5 |
| Physical & Sport Sciences | 3 | 3 | 1 | 1 | 3 | 0 |

| Department offering the Programme | Admitted | | | | | |
|-----------------------------------|----------|---------|---------|---------|---------|---------|
| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
| Music | 6 | 5 | 11 | 11 | 11 | 7 |
| Agriculture | 0 | 0 | 0 | 0 | 0 | 1 |
| Agronomy | 0 | 0 | 0 | 2 | 0 | 0 |
| Entomology | 0 | 0 | 0 | 1 | 0 | 0 |
| Genetics Plant Breeding | 0 | 0 | 0 | 0 | 0 | 1 |
| Horticulture | 0 | 0 | 0 | 0 | 1 | 0 |
| Agri. Economics | 0 | 0 | 0 | 0 | 0 | 2 |
| Medicine | 0 | 1 | 1 | 0 | 0 | 0 |
| Medicine | 0 | 2 | 0 | 1 | 0 | 0 |
| Dentistry | 0 | 1 | 0 | 0 | 0 | 0 |
| Division of Oral Pathology | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 28 | 141 | 150 | 189 | 159 | 147 |

1.2.5 Does the university facilitate dual degree and twinning programmes? If yes, give details.

Yes, the University through its statutory provision allows dual degrees and twinning programmes for students on an exchange basis for mutual benefits. A dual degree programme is already in place in the Faculty of Agriculture, the details of which are provided in the Table.

| Details of Degree offered by Annamalai University | | | | | | Details of Degree offered by Dalhousie University | | | | | |
|---|-----------------------|-------------------------------|-----------------------|------------------------------|------------------------------------|---|-----------------------|-------------------------------|-----------------------|------------------------------|------------------------------------|
| Name | Total No. of Semester | Semester spent by the Student | Total Credits offered | Credits taken up by Students | Credits transferred from Dalhousie | Name | Total No. of Semester | Semester spent by the Student | Total Credits offered | Credits taken up by Students | Credits transferred from Annamalai |
| B.Sc. (Ag.) | 9 | 6 | 156 | 129 | 27 | B.Tech. in Environ. Landscap e Hort. | 9 | 3 | 156 | 27 | 129 |
| B.Sc. (Hort.) | 9 | 6 | 156 | 126 | 30 | | 9 | 3 | 156 | 30 | 126 |

The University is engaged in the process of discussion with Tennessee Technological University (TTU), Tennessee, USA, to come up with a dual degree programme for the Undergraduate Engineering degree programmes in the Faculty of Engineering and Technology on the lines of an MoU to be signed.

The Faculty is also deliberating on similar lines for its postgraduate students to pursue the second year of their programme at TTU.

The University is exploring the option of introducing a Bachelor's degree in Music for the benefit of students of TTU.

1.2.6 Does the university offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

The programmes offered in the Faculty of Medicine, Faculty of Dentistry and Department of Pharmacy are self-financing programmes. The List of Programmes offered by these faculties is given in 1.2.1. The procedure for admitting students for these self-financing programmes is provided in Section 2.1.2

- The fees structure of these programmes varies in comparison with aided programs.
- Qualification of teachers and salary are at par with UGC norms and matches salaries of other organizations and universities.

1.2.7 Does the university provide the flexibility of bringing together the conventional face-to-face mode and the distance mode of education and allow students to choose and combine the courses they are interested in? If 'yes,' give operational details.

Yes. The University provides flexibility of combining the conventional and distance mode of education. It allows the students to withdraw from a conventional course and join the same course in distance education mode. The institution provides the students of on-campus programmes to take up certificate and diploma programmes in the distance mode of education in the field of their interest. This enables students to imbibe various related skills such as communication skills, computer skills, and management skills.

1.2.8 Has the university adopted the Choice Based Credit System (CBCS)? If yes, for how many programmes? What efforts have been made by the university to encourage the introduction of CBCS in its affiliated colleges?

Yes, the Choice Based Credit System (CBCS) has been adopted by the university in all its UG and PG programmes except five year integrated programmes.

| S.No. | Name of the Faculty | Number of CBCS Programmes | |
|-------|-----------------------|---------------------------|-----------|
| | | UG | PG |
| 1. | Arts | - | 13 |
| 2. | Science | - | 16 |
| 3. | Marine Sciences | - | 5 |
| 4. | Indian Languages | - | 3 |
| 5. | Engineering and Tech. | 11 | 29 |
| 6. | Education | 3 | 5 |
| 7. | Agriculture | 2 | 11 |
| | Total | 16 | 82 |

1.2.9 What percentage of programmes offered by the university follow:

Around 30% of programmes follow annual pattern as detailed below.

- Both PG and diploma programmes offered in Faculty of Medicine and Dentistry
- Few programmes in Faculty of Education and Fine Arts
- First year Undergraduate Engineering degree programme

The remaining 70% of the programmes in the University follow semester pattern.

1.2.10 How does the university promote inter-disciplinary programmes? Name a few programmes and comment on their outcome.

The University offers inter-disciplinary programmes on diverse fields of study in different departments to promote applied sciences. The list of inter-disciplinary programmes offered by different departments is given below.

| Degree | Inter-Disciplinary Programme | Offering Department | Offering Faculty |
|--------------------|---------------------------------------|---|----------------------------|
| M.B.A. | Environmental Management | Economics | Arts |
| M.Com | Computer Applications | Commerce | Arts |
| M.Sc.(Integrated) | Biotechnology | Biochemistry | Science |
| M.Sc. (Integrated) | Bioinformatics | Zoology | Science |
| M.Sc. (Integrated) | Environmental Biotechnology | Zoology | Science |
| M.Sc. (Integrated) | Microbiology | Zoology | Science |
| M.E. | Environmental Engineering | Civil Engineering | Engineering and Technology |
| M.E. | Disaster Management and Engineering | Civil and Structural Engineering | Engineering and Technology |
| M.E. | Nanomaterials and Surface Engineering | Manufacturing Engineering | Engineering and Technology |
| M.E. | Smart Energy Systems | Electrical Engineering | Engineering and Technology |
| M.E. | Rehabilitative Instrumentation | Electronics and Instrumentation Engineering | Engineering and Technology |
| M.Tech. | Food Processing Technology | Chemical Engineering | Engineering and Technology |
| M.Tech. | Industrial Biotechnology | Chemical Engineering | Engineering and Technology |
| M.Tech. | Industrial Safety Engineering | Chemical Engineering | Engineering and Technology |

1.3 Curriculum Enrichment

1.3.1 How often is the curriculum of the university reviewed and upgraded for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

The Board of Studies meets periodically to keep track of the challenges and identifies the necessary changes to make the curriculum socially relevant and job-oriented. It revises the curriculum in order to remove obsolescence and introduce a new direction to the courses such that it retains its knowledge intensive trait and addresses the emerging needs.

In every faculty the courses are tailored with the objective of providing development and trained manpower to the needs of industries. The existing courses are modified keeping in view the guidelines of regulatory bodies and taking into account the recommendations of the members of the Board of Studies who are experts in the courses concerned.

1.3.2 During the last four years, how many new programmes at UG and PG levels were introduced? Give details.

During the last four years the following new programmes were introduced at PG level.

- M.Com. Computer Applications
- M.S.W. (Master of Social Works)
- M.Sc. Marine Pharma (CBCS)
- MBA Marketing, Finance Management, HRM, and International Trade
- M.Sc. Biotechnology (CBCS)
- M.B.A. (Agri Business)
- M.D. Psychiatry
- M.Sc. Marine Chemistry
- M.Sc. Biotechnology (CBCS)
- M.E. Disaster Management and Engineering
- M.E. Nano Materials and Surface Engineering
- M.E. Smart Energy Systems
- M.E. Rehabilitative Instrumentation
- PG Dip. in Gym Instructor
- PG Dip. in Remote Sensing and GIS
- PG Dip. in Petroleum and Geo-science.

1.3.3 What are the strategies adopted for the revision of the existing programmes? What percentage of courses underwent a syllabus revision?

The information obtained through feedback from different sources is placed in the meetings of the Board of Studies. The feedback obtained from students, alumni, employer, community, and industry is given due weightage in framing the curriculum. The feedback given by students and stakeholders is the basic matrix for identifying shortfalls in curricular content and reinforcements needed therein.

The experts analyze the syllabus and any significant modifications suggested are incorporated in the curriculum. The syllabus is periodically revised to cater to the modern employment opportunities of the job market. The syllabi of almost all the programmes of study continue to be revised in a phased manner.

Most of the courses are subject to revision across a specific timeframe to keep pace with developments in those fields. The extent of revision ranges from 50- 100%.

1.3.4 What are the value-added courses offered by the university and how does the university ensure that all students have access to them?

Several value added courses like Phonetics, Lexicography, Natural Language Processing, Translation and Soft Skill Development Programme are part of the curriculum in the Faculty of Indian Languages for the benefit of the students. The course titled "Ethics in Engineering" is offered as a core subject for all disciplines of Engineering at UG level. In Education, Yoga and Value Education are the value-added courses offered. In programmes offered by Nursing, Value added Courses like Yoga, Sociology, Psychology and Communication techniques are included as a part of the curriculum.

In the Faculty of Agriculture, the following new courses/topics are included in UG and PG programmes offered: Biotechnology, Growth Analysis, Crop Physiology, Invasive Alien Species, Weed Risk Assessment and Ecological Risk Assessment of GMOs. Further all students are allowed to take up the following value added courses through DDE mode.

- P.G. Diploma in Farming System Management
- P.G. Diploma in Intellectual Properties Right
- P.G. Diploma in Ornamental and Landscape Gardening
- P.G. Diploma in Dairy Technology
- PG Diploma in Marine Environmental Pollution & Management
- PG Diploma in Aquaculture Management
- PG Diploma in Marine Microbial Technology
- PG Diploma in Personal Management & Industrial Relations
- PG Diploma in Advertising

- PG Diploma in Yoga
- PG Diploma in Cyber security
- PG Diploma in Biomedical Waste Management
- Diploma in Coastal Agriculture
- Diploma in Urban Pest Management
- Diploma in English Journalism
- Diploma in Horticulture Nursery Management
- Diploma in Bio-Fertilizer and Bio Composting Tech.
- Diploma in Livestock Products Technology

These courses are offered to all students of various faculties, during the regular curriculum duration, through summer, weekend or evening classes.

1.3.5 Has the university introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

Yes. A pattern of equal weightage is ensured for pure and applied aspects for the various programmes in the University. Wide opportunities are given to students to develop their proficiency in theory, to gain practical knowledge in their courses of study, to acquire computer skills and to improve their I.Q. This institution tries to impart multiple skills such as learning skills, computer skills, technical and managerial skills and marketing skills to the students. Online material is used to supplement classroom teaching and students are given problems that call for reasoning and logical thinking.

1.4 Feedback System

1.4.1 Does the university have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

The University possesses a mechanism to obtain feedback from students both on the course content and teaching methodology. The students at the end of each semester submit a proforma detailing the merits and demerits of each course. These comments are reviewed and considered while revising the syllabus.

1.4.2 Does the university elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and its impact.

The feedback on curriculum from the national and international faculty is obtained through mail or online discussions. When international faculty visit the departments to attend workshops/seminars, their suggestions are sought for the improvement of syllabi.

1.4.3 Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of.

Not applicable

1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the university in ensuring the effective development of the curricula?

Curriculum aspects are strengthened by revision of syllabi on par with emerging trends and to meet global demand by giving thrust on application oriented subjects. An Internal Quality Assurance Cell is in force and under the aegis of the Cell, periodic meetings are held with the Heads of the Departments and other members.

A questionnaire is sent to all the subunits in order to assess the quality of the curriculum and the Administrator/Vice- Chancellor frequently engages in discussion with the IQAC members and reiterates the need for quality in teaching, research and extension.

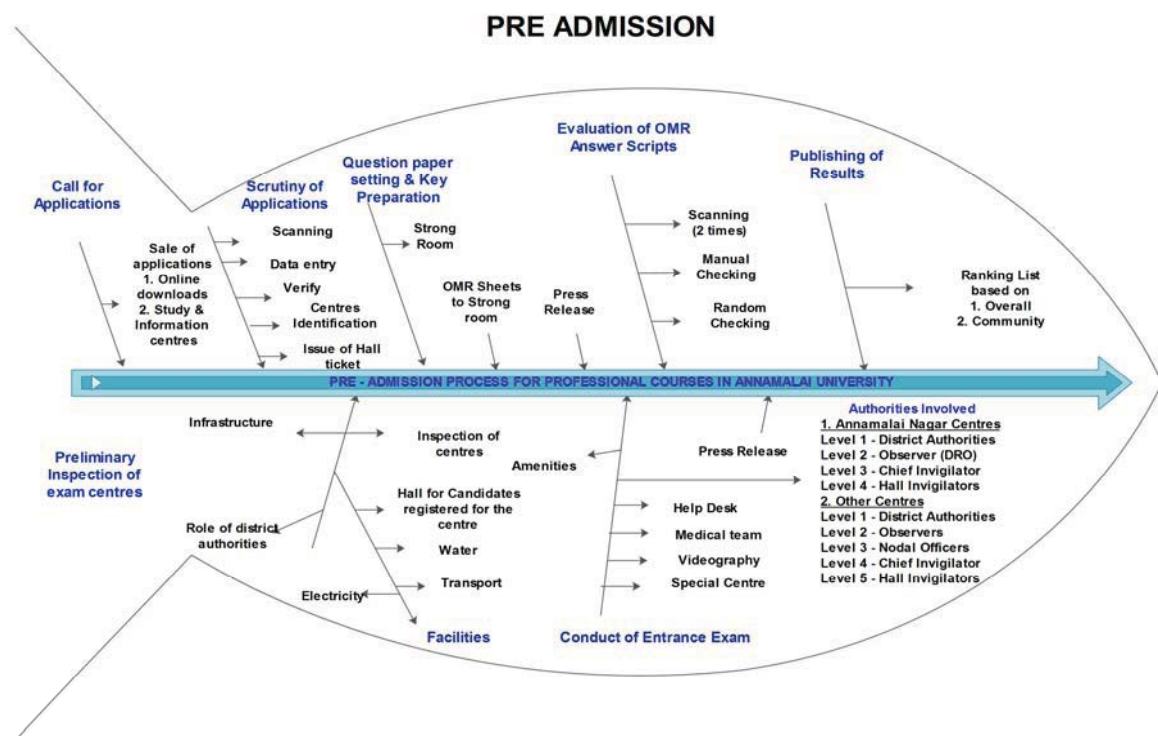
Any other information regarding Curricular Aspects which the university would like to include.

CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

2.1.1 How does the university ensure publicity and transparency in the admission process?

To ensure publicity and transparency in the admission process, admissions to the various programmes of study are advertised in leading newspapers in English and Tamil and also through the media. Further, information regarding the admission process is posted in the Annamalai University website. The institution also publishes the selected list of candidates in newspapers and in the University website. The preadmission procedure is schematically illustrated below.

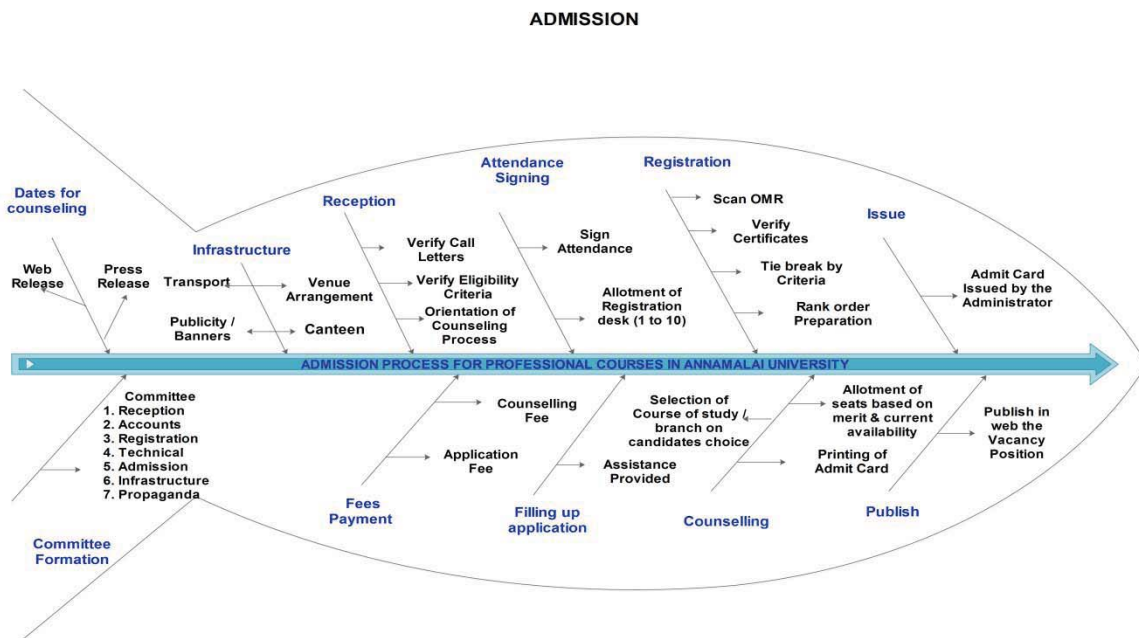


2.1.2 Explain in detail the process of admission put in place by the university. List the criteria for admission: (e.g.: (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common entrance test conducted by state agencies and national agencies (v) other criteria followed by the university (please specify).

The University adopts a transparent admission process, adhering to the reservation policy and norms spelt out by the appropriate State agencies. The modes of admission for different faculties are detailed in the following table:

| Faculty | Mode of Admission |
|--|---|
| Agriculture, Engineering & Technology, Medicine and Dentistry, | Common Entrance Test followed by counselling. |
| Arts & Science | Marks obtained in +2 in case of 5 year Integrated Programmes and Marks obtained in UG programmes in case of two year Masters programmes. |
| Management | Undergraduate Marks, Entrance Test and Interview. |
| Education | Undergraduate Marks, Entrance Test and Interview. |
| Indian Languages | Marks obtained in +2 in case of 5 year Integrated Programmes and Marks obtained in UG programmes in case of two year Masters programmes. |
| Marine Sciences | Marks obtained in +2 in case of 5 year Integrated Programmes and Marks obtained in UG programmes in case of two year Masters programmes. M.Sc. Marine Biotechnology the students are selected through common entrance test on all India basis conducted by Jawaharlal Nehru University, New Delhi. |

The following illustration presents the mode of admission for Professional courses in greater detail.



2.1.3 Provide details of admission process in the affiliated colleges and the university’s role in monitoring the same.

Not applicable

2.1.4 Does the university have a mechanism to review its admission process and student profile annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

The university authorities review the admission process annually for modifying eligibility criteria as per government norms, if any, and analyses student profile by organizing meetings with Heads of the Departments. Further, scrutiny of the profile of students is done centrally by the admission section in the central administrative office.

2.1.5 What are the strategies adopted to increase / improve access for students belonging to the following categories:

- * **SC/ST**
- * **OBC**
- * **Women**
- * **Persons with varied disabilities**
- * **Economically weaker sections**
- * **Outstanding achievers in sports and other extracurricular activities**

Special reservations earmarked for various disadvantaged communities and weaker sections of the society are prominently indicated in the advertisements. Fee concession is provided in the cost of application for admission. The prospectus given to the aspirants elaborate the various tuition fee concessions and exam fee concessions extended by the government to the disadvantaged communities and economically weaker sections of society. A special cell for SC/ST students functions in the University. This cell facilitates obtaining scholarships from the Government, arranging educational loans from banks and the Government as well as non-governmental agencies, empowering the SC & ST students with remedial coaching, endowment cash prizes etc. This helps to increase and improve access for SC & ST students.

Special quota as per Government norms is followed for MBC and BC students. First graduate scholarship scheme of the government is made available to eligible students of all categories. Priority and concessions given to sports persons, athletes, and women are also highlighted. Scholarships such as single girl child scholarship as announced by Government are provided. Special measures such as scholarships from funded projects are used to attract outstanding achievers and persons with disabilities. Information on various endowment scholarships given by the university is also provided. All efforts are made to create access to higher education for disadvantaged groups, as per Government norms.

2.1.6 Number of students admitted in university departments in the last four academic years:

Faculty of Arts

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|-------------------------------|----------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | | M | F | M | F | M | F | M | F |
| English | SC | 100 | 77 | 155 | 83 | 218 | 144 | 242 | 141 |
| | ST | 1 | 0 | 2 | 0 | 1 | 1 | 2 | 1 |
| | OBC | 30 | 35 | 36 | 29 | 31 | 40 | 42 | 31 |
| | General | 4 | 10 | 3 | 3 | 7 | 5 | 9 | 1 |
| | Total | 135 | 122 | 196 | 115 | 257 | 190 | 295 | 174 |
| History | SC | 20 | 12 | 16 | 16 | 23 | 22 | 22 | 20 |
| | ST | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| | OBC | 6 | 6 | 6 | 3 | 20 | 14 | 4 | 4 |
| | General | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 |
| | Total | 30 | 18 | 23 | 20 | 43 | 37 | 28 | 25 |
| Political Science | SC | 10 | 0 | 9 | 1 | 2 | 3 | 4 | 1 |
| | ST | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| | OBC | 2 | 1 | 4 | 0 | 3 | 2 | 2 | 1 |
| | General | 9 | 1 | 3 | 1 | 7 | 4 | 8 | 0 |
| | Total | 21 | 2 | 16 | 2 | 13 | 9 | 14 | 2 |
| Economics | SC | 32 | 20 | 26 | 24 | 36 | 25 | 32 | 29 |
| | ST | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| | OBC | 18 | 13 | 14 | 15 | 21 | 16 | 14 | 8 |
| | General | 18 | 12 | 14 | 7 | 21 | 14 | 22 | 9 |
| | Total | 68 | 45 | 54 | 47 | 78 | 55 | 69 | 47 |
| Sociology | SC | 3 | 11 | 13 | 4 | 11 | 7 | 12 | 12 |
| | ST | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 |
| | OBC | 1 | 3 | 6 | 4 | 7 | 4 | 6 | 0 |
| | General | 0 | 1 | 3 | 1 | 2 | 2 | 1 | 2 |
| | Total | 5 | 15 | 22 | 9 | 21 | 13 | 21 | 15 |
| Commerce | SC | 81 | 41 | 78 | 42 | 91 | 33 | 68 | 51 |
| | ST | 1 | 0 | 1 | 0 | 2 | 0 | 2 | 1 |
| | OBC | 55 | 39 | 49 | 41 | 42 | 28 | 41 | 31 |
| | General | 10 | 4 | 13 | 22 | 14 | 4 | 11 | 11 |
| | Total | 147 | 84 | 141 | 105 | 149 | 65 | 122 | 94 |
| Centre for Population Studies | SC | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 2 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 4 | 0 | 4 | 4 | 1 | 1 | 2 | 1 |
| | General | 24 | 11 | 14 | 14 | 9 | 9 | 3 | 9 |
| | Total | 32 | 11 | 22 | 18 | 10 | 10 | 5 | 12 |
| Business Administration | SC | 179 | 36 | 252 | 47 | 251 | 55 | 305 | 81 |
| | ST | 0 | 4 | 0 | 2 | 1 | 8 | 5 | 1 |
| | OBC | 199 | 45 | 228 | 54 | 179 | 64 | 201 | 81 |
| | General | 90 | 25 | 106 | 14 | 100 | 12 | 67 | 12 |
| | Total | 468 | 110 | 586 | 117 | 531 | 139 | 578 | 175 |

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|-------------------------------|----------|-----------|----|-----------|----|-----------|----|-----------|----|
| | | M | F | M | F | M | F | M | F |
| Library & Information Science | SC | 6 | 5 | 7 | 4 | 10 | 6 | 8 | 5 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 6 | 7 | 4 | 4 | 6 | 9 | 6 | 5 |
| | General | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 |
| | Total | 12 | 13 | 12 | 8 | 17 | 17 | 16 | 11 |
| Philosophy | SC | 2 | 3 | 3 | 3 | 1 | 0 | 3 | 1 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 0 | 3 | 1 | 2 | 0 | 1 | 1 | 0 |
| | General | 0 | 0 | 0 | 0 | 1 | 1 | 6 | 0 |
| | Total | 2 | 6 | 4 | 5 | 2 | 2 | 10 | 1 |
| Centre for Rural Development | SC | 0 | 0 | 12 | 13 | 7 | 5 | 1 | 8 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| | OBC | 0 | 0 | 2 | 3 | 3 | 0 | 2 | 0 |
| | General | 0 | 0 | 3 | 0 | 6 | 3 | 6 | 4 |
| | Total | 0 | 0 | 17 | 16 | 16 | 8 | 12 | 13 |

Faculty of Science

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|-------------|----------|-----------|----|-----------|----|-----------|----|-----------|----|
| | | M | F | M | F | M | F | M | F |
| Mathematics | SC | 30 | 9 | 24 | 11 | 16 | 23 | 16 | 12 |
| | ST | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | OBC | 12 | 13 | 10 | 17 | 14 | 18 | 14 | 27 |
| | General | 0 | 1 | 0 | 2 | 3 | 3 | 4 | 2 |
| | Total | 42 | 23 | 34 | 30 | 33 | 45 | 34 | 41 |
| Statistics | SC | 8 | 5 | 2 | 1 | 10 | 4 | 2 | 1 |
| | ST | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 3 | 6 | 5 | 7 | 4 | 2 | 1 | 0 |
| | General | 8 | 5 | 4 | 7 | 5 | 4 | 6 | 5 |
| | Total | 20 | 16 | 12 | 15 | 19 | 10 | 9 | 6 |
| Physics | SC | 40 | 16 | 53 | 22 | 58 | 28 | 47 | 19 |
| | ST | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 0 |
| | OBC | 23 | 30 | 19 | 15 | 24 | 21 | 13 | 14 |
| | General | 4 | 1 | 5 | 1 | 2 | 0 | 3 | 4 |
| | Total | 68 | 47 | 79 | 38 | 86 | 49 | 64 | 37 |
| Chemistry | SC | 91 | 34 | 139 | 33 | 126 | 45 | 123 | 52 |
| | ST | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| | OBC | 42 | 34 | 46 | 18 | 43 | 24 | 39 | 15 |
| | General | 12 | 7 | 5 | 3 | 5 | 1 | 3 | 1 |
| | Total | 147 | 75 | 190 | 54 | 176 | 70 | 165 | 68 |
| Botany | SC | 15 | 6 | 30 | 7 | 35 | 12 | 25 | 16 |
| | ST | 1 | 0 | 0 | 0 | 1 | 2 | 4 | 0 |
| | OBC | 13 | 9 | 19 | 11 | 8 | 13 | 14 | 11 |
| | General | 1 | 1 | 6 | 1 | 2 | 4 | 1 | 1 |
| | Total | 30 | 16 | 55 | 19 | 46 | 31 | 44 | 28 |

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|------------------------------|----------|-----------|----|-----------|----|-----------|----|-----------|-----|
| | | M | F | M | F | M | F | M | F |
| Zoology | SC | 69 | 43 | 57 | 56 | 70 | 49 | 69 | 62 |
| | ST | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 2 |
| | OBC | 26 | 27 | 10 | 36 | 28 | 27 | 18 | 40 |
| | General | 1 | 6 | 1 | 4 | 2 | 4 | 7 | 6 |
| | Total | 96 | 76 | 69 | 97 | 100 | 80 | 95 | 110 |
| Earth Sciences | SC | 18 | 4 | 18 | 1 | 16 | 7 | 21 | 3 |
| | ST | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 10 | 10 | 14 | 3 | 13 | 4 | 5 | 0 |
| | General | 5 | 2 | 9 | 3 | 5 | 3 | 5 | 1 |
| | Total | 33 | 17 | 42 | 7 | 34 | 14 | 31 | 4 |
| Biochemistry & Biotechnology | SC | 45 | 25 | 50 | 33 | 56 | 27 | 28 | 26 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| | OBC | 23 | 28 | 30 | 39 | 43 | 40 | 25 | 16 |
| | General | 3 | 12 | 10 | 6 | 13 | 18 | 9 | 8 |
| | Total | 71 | 65 | 90 | 78 | 112 | 85 | 64 | 50 |

Faculty of Marine Sciences

| Departments | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|-----------------------|----------|-----------|----|-----------|----|-----------|----|-----------|----|
| | | M | F | M | F | M | F | M | F |
| CAS in Marine Biology | SC | 35 | 8 | 30 | 9 | 34 | 9 | 22 | 9 |
| | ST | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| | OBC | 51 | 21 | 51 | 31 | 52 | 23 | 29 | 19 |
| | General | 12 | 7 | 8 | 4 | 9 | 9 | 7 | 3 |
| | Total | 99 | 37 | 89 | 44 | 95 | 42 | 58 | 31 |

Faculty of Indian Languages

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|--------------------------|----------|-----------|----|-----------|----|-----------|----|-----------|----|
| | | M | F | M | F | M | F | M | F |
| Tamil Studies & Research | SC | 33 | 40 | 33 | 18 | 36 | 42 | 39 | 36 |
| | ST | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | OBC | 15 | 20 | 8 | 19 | 17 | 23 | 12 | 19 |
| | General | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| | Total | 50 | 60 | 41 | 37 | 55 | 65 | 53 | 55 |
| Hindi | SC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | General | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | Total | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| CAS in Linguistics | SC | 2 | 0 | 1 | 1 | 3 | 0 | 2 | 3 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 4 | 2 | 3 | 1 | 2 | 6 | 2 | 1 |
| | General | 0 | 0 | 1 | 0 | 3 | 1 | 3 | 0 |
| | Total | 6 | 2 | 5 | 2 | 8 | 7 | 7 | 4 |

Faculty of Engineering & Technology

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|-------------------------------|----------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|
| | | M | F | M | F | M | F | M | F |
| Civil | SC | 214 | 31 | 347 | 33 | 382 | 39 | 368 | 31 |
| | ST | 8 | 0 | 21 | 2 | 27 | 5 | 40 | 10 |
| | OBC | 254 | 35 | 274 | 26 | 241 | 36 | 183 | 13 |
| | General | 71 | 12 | 83 | 10 | 141 | 7 | 125 | 4 |
| | Total | 547 | 78 | 725 | 71 | 791 | 87 | 716 | 58 |
| Civil & Structural | SC | 96 | 25 | 93 | 24 | 94 | 18 | 105 | 20 |
| | ST | 0 | 1 | 2 | 1 | 4 | 0 | 1 | 0 |
| | OBC | 144 | 36 | 85 | 24 | 78 | 25 | 89 | 25 |
| | General | 15 | 2 | 1 | 28 | 7 | 2 | 5 | 5 |
| | Total | 255 | 64 | 181 | 77 | 183 | 45 | 200 | 50 |
| Manufacturing | SC | 82 | 4 | 67 | 1 | 36 | 0 | 44 | 1 |
| | ST | 2 | 0 | 3 | 0 | 1 | 0 | 0 | 0 |
| | OBC | 133 | 13 | 102 | 6 | 31 | 3 | 25 | 0 |
| | General | 89 | 1 | 78 | 0 | 14 | 0 | 8 | 0 |
| | Total | 306 | 18 | 250 | 7 | 82 | 3 | 77 | 1 |
| Electrical & Electronics | SC | 164 | 26 | 156 | 51 | 175 | 63 | 151 | 66 |
| | ST | 13 | 0 | 5 | 3 | 7 | 0 | 3 | 1 |
| | OBC | 426 | 82 | 248 | 102 | 227 | 73 | 132 | 74 |
| | General | 561 | 105 | 285 | 57 | 62 | 39 | 177 | 39 |
| | Total | 1164 | 213 | 694 | 213 | 471 | 175 | 463 | 180 |
| Electronics & Instrumentation | SC | 71 | 16 | 42 | 13 | 32 | 16 | 44 | 17 |
| | ST | 8 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| | OBC | 174 | 49 | 72 | 24 | 60 | 31 | 32 | 8 |
| | General | 237 | 26 | 76 | 17 | 16 | 5 | 6 | 0 |
| | Total | 490 | 92 | 190 | 55 | 108 | 53 | 82 | 25 |
| Chemical | SC | 76 | 3 | 45 | 4 | 27 | 0 | 29 | 10 |
| | ST | 1 | 0 | 2 | 1 | 2 | 0 | 0 | 0 |
| | OBC | 64 | 8 | 26 | 15 | 50 | 12 | 22 | 8 |
| | General | 17 | 0 | 7 | 4 | 16 | 2 | 9 | 3 |
| | Total | 158 | 11 | 80 | 24 | 95 | 14 | 60 | 21 |
| Computer Science | SC | 196 | 57 | 91 | 59 | 124 | 64 | 170 | 111 |
| | ST | 9 | 0 | 1 | 1 | 2 | 1 | 2 | 0 |
| | OBC | 477 | 220 | 193 | 118 | 195 | 145 | 185 | 141 |
| | General | 437 | 99 | 106 | 34 | 108 | 35 | 111 | 34 |
| | Total | 1119 | 376 | 391 | 212 | 429 | 245 | 468 | 286 |
| Pharmacy | SC | 18 | 11 | 28 | 12 | 34 | 12 | 45 | 5 |
| | ST | 1 | 0 | 1 | 0 | 2 | 1 | 2 | 2 |
| | OBC | 63 | 28 | 89 | 30 | 70 | 37 | 60 | 32 |
| | General | 82 | 24 | 100 | 34 | 54 | 20 | 45 | 33 |
| | Total | 164 | 63 | 218 | 76 | 160 | 70 | 152 | 72 |

Faculty of Education

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|--------------------------------------|----------|-----------|-----|-----------|-----|-----------|------|-----------|-----|
| | | M | F | M | F | M | F | M | F |
| Education | SC | 144 | 119 | 367 | 296 | 1031 | 671 | 1203 | 520 |
| | ST | 1 | 0 | 14 | 3 | 40 | 10 | 66 | 12 |
| | OBC | 52 | 128 | 79 | 188 | 230 | 371 | 204 | 182 |
| | General | 4 | 16 | 6 | 21 | 8 | 18 | 2 | 8 |
| | Total | 201 | 263 | 466 | 508 | 1309 | 1070 | 1475 | 722 |
| Psychology | SC | 1 | 2 | 3 | 2 | 5 | 4 | 5 | 1 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 7 | 3 | 12 | 8 | 10 | 8 | 4 | 9 |
| | General | 0 | 2 | 5 | 6 | 5 | 4 | 4 | 2 |
| | Total | 8 | 7 | 20 | 16 | 20 | 16 | 13 | 12 |
| Physical Education & Sports Sciences | SC | 505 | 114 | 355 | 73 | 453 | 84 | 334 | 61 |
| | ST | 12 | 1 | 10 | 1 | 10 | 2 | 2 | 0 |
| | OBC | 319 | 70 | 200 | 41 | 251 | 51 | 167 | 22 |
| | General | 14 | 4 | 7 | 0 | 24 | 1 | 29 | 6 |
| | Total | 850 | 189 | 572 | 115 | 738 | 138 | 532 | 89 |
| Centre for Yoga Studies | SC | 6 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 63 | 12 | 10 | 3 | 0 | 0 | 0 | 0 |
| | General | 5 | 4 | 6 | 2 | 0 | 0 | 0 | 1 |
| | Total | 74 | 21 | 17 | 5 | 0 | 0 | 0 | 1 |
| Life Long Learning | SC | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

Faculty of Fine Arts

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|------------|----------|-----------|----|-----------|----|-----------|----|-----------|----|
| | | M | F | M | F | M | F | M | F |
| Music | SC | 17 | 3 | 11 | 5 | 23 | 3 | 20 | 2 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 16 | 16 | 26 | 14 | 33 | 7 | 37 | 6 |
| | General | 3 | 4 | 4 | 11 | 5 | 21 | 8 | 9 |
| | Total | 36 | 23 | 41 | 30 | 61 | 31 | 65 | 17 |

Faculty of Agriculture

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|--|----------|-----------|----|-----------|-----|-----------|-----|-----------|-----|
| | | M | F | M | F | M | F | M | F |
| B.Sc. Agriculture | SC | 113 | 17 | 261 | 38 | 382 | 77 | 445 | 126 |
| | ST | 10 | 1 | 31 | 3 | 49 | 24 | 87 | 57 |
| | OBC | 118 | 18 | 311 | 64 | 520 | 136 | 843 | 258 |
| | General | 30 | 13 | 35 | 30 | 94 | 40 | 185 | 80 |
| | Total | 271 | 49 | 638 | 135 | 1045 | 277 | 1560 | 521 |
| B.Sc. (Ag.) Horticulture | SC | 15 | 0 | 16 | 1 | 5 | 1 | 21 | 3 |
| | ST | 2 | 0 | 1 | 4 | 5 | 3 | 10 | 11 |
| | OBC | 10 | 0 | 12 | 3 | 14 | 1 | 16 | 5 |
| | General | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| | Total | 27 | 0 | 29 | 8 | 25 | 6 | 48 | 19 |
| M.Sc. Agronomy | SC | 4 | 3 | 7 | 1 | 12 | 2 | 3 | 6 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 2 | 1 | 10 | 0 | 5 | 0 | 9 | 2 |
| | General | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 0 |
| | Total | 6 | 4 | 18 | 1 | 20 | 2 | 14 | 8 |
| M.Sc. Entomology | SC | 5 | 1 | 2 | 0 | 1 | 0 | 9 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 2 | 1 | 2 | 1 | 0 | 1 | 1 | 0 |
| | General | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| | Total | 7 | 2 | 4 | 1 | 2 | 1 | 10 | 0 |
| M.Sc. Plant Pathology | SC | 5 | 0 | 1 | 0 | 4 | 1 | 0 | 2 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 |
| | General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 5 | 1 | 2 | 0 | 5 | 1 | 2 | 2 |
| M.Sc. Agrl. Microbiology | SC | 2 | 1 | 10 | 4 | 3 | 2 | 1 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 3 | 1 | 3 | 4 | 8 | 4 | 0 | 0 |
| | General | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| | Total | 6 | 2 | 13 | 9 | 11 | 7 | 1 | 0 |
| M.Sc. Soil Science & Agrl. Chemistry | SC | 0 | 2 | 5 | 1 | 3 | 0 | 2 | 1 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 1 | 2 | 5 | 1 | 3 | 0 | 2 | 2 |
| M.Sc. Genetics & Plant Breeding | SC | 5 | 2 | 9 | 3 | 11 | 4 | 3 | 1 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 3 | 0 | 6 | 1 | 5 | 0 | 6 | 0 |
| | General | 1 | 0 | 8 | 0 | 3 | 0 | 4 | 1 |
| | Total | 9 | 2 | 23 | 4 | 19 | 4 | 13 | 2 |

| Department | Category | 2008-2009 | | 2009-2010 | | 2010-2011 | | 2011-2012 | |
|--|----------|-----------|---|-----------|---|-----------|---|-----------|---|
| | | M | F | M | F | M | F | M | F |
| M.Sc. Horticulture | SC | 6 | 2 | 8 | 1 | 5 | 3 | 6 | 2 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | OBC | 2 | 1 | 9 | 1 | 5 | 2 | 6 | 1 |
| | General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Total | 8 | 3 | 17 | 2 | 10 | 5 | 13 | 4 |
| M.Sc. Agrl. Economics & MBA Agri. Business | SC | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | OBC | 4 | 0 | 3 | 0 | 1 | 1 | 0 | 0 |
| | General | 7 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| | Total | 12 | 1 | 7 | 0 | 2 | 1 | 0 | 0 |
| M.Sc. Agrl. Extension | SC | 3 | 1 | 7 | 1 | 6 | 1 | 11 | 1 |
| | ST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | OBC | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| | General | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 4 | 1 | 8 | 2 | 7 | 1 | 11 | 2 |

2.1.7 Has the university conducted any analysis of demand ratio for the various programmes of the university departments and affiliated colleges? If so, highlight the significant trends explaining the reasons for increase / decrease.

Yes, the university conducts analysis of admission every year and the performance of various faculties. This helps in evolving strategies to increase enrolment, to improve infrastructure needed for certain programmes and to assess the current trend in students' preferences. Demand ratios of programmes offered under different faculties are tabulated.

| S.No. | Faculty | No. of Applications | No. of Students Admitted | Demand Ratio |
|-------|--------------------------|---------------------|--------------------------|--------------|
| 1. | Arts | 4298 | 2094 | 2.1 : 1 |
| 2. | Science | 4265 | 1854 | 2.3 : 1 |
| 3. | Marine Sciences | 137 | 86 | 1.60 : 1 |
| 4. | Indian Languages | 342 | 262 | 1.30 : 1 |
| 5. | Engineering & Technology | 8350 | 5565 | 1.50 : 1 |
| 6. | Education | 3592 | 849 | 4.23 : 1 |
| 7. | Fine Arts | 98 | 87 | 1.20 : 1 |
| 8. | Agriculture | 9552 | 2729 | 3.50 : 1 |

Analyses of recent data on demand ratio for the programmes in different faculties indicate that the demand for the programmes in the faculties like Education and Agriculture are more, followed by Science and Arts. However, it keeps changing in tune with the trends prevailing from time to time and the policies of the government with respect to different sectors.

2.1.8 Were any programmes discontinued / staggered by the university in the last four years? If yes, please specify the reasons.

| S.No. | Programmes staggered in the last 4 years | Reasons |
|-------|--|---|
| 1. | M.Com. Financial Services | Poor response. |
| 2. | M.Sc. Organic Chemistry | As the student's response to M.Sc. General Chemistry is overwhelming and industries also prefer graduates of general chemistry, the takers proportion decreased. |
| 3. | M.Sc. Coastal Aquaculture | Drastic reduction in feeder section of students (<i>ie.</i> , B.Sc. Science programmes) and preference for professional courses by candidates are the major reasons for declining response to these courses. |
| 4. | M.Sc. Food Technology | |
| 5. | M.Sc. Marine Microbiology | |
| 6. | M.Sc. Marine Chemistry | |
| 7. | M.Sc. Marine Pharmacology | |
| 8. | M.Sc. Marine Geology (5 Yr. Int) | |
| 9. | M.E. Geotechnical Engineering | Insufficient takers. |
| 10. | M.Sc. Information Technology | |
| 11. | M.Sc. Software Engineering | |
| 12. | Music (5 Yr. Integ. Prog.) | |
| 13. | M.Phil. Summer Sequence Programme | Candidates preferred longer duration to complete the course. |

2.2 Catering to Diverse Needs of Students

2.2.1 Does the university organize orientation / induction programme for freshers? If yes, give details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes, there is a convention of organizing induction programmes for freshers before the actual commencement of the programme in every faculty. These include 'Meet your teacher' in Arts, 'Fresher's welcome' in Engineering, "Commencement day" function in Agriculture, "Induction training" in Medicine, etc. In these programmes, both parents and students are explained the details of the programme in which they got enrolled and code of conduct and the facilities available etc. At postgraduation level also, the freshers are given orientation by organizing a meeting in the department by the Head and senior faculty. A co-ordinator is assigned for each batch to monitor and assist the freshers in learning the protocol of the department and to get adapted to the new environment.

2.2.2 Does the university have a mechanism through which the “differential requirements of the student population” are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

Entrance test conducted at the time of admission helps to assess students’ knowledgebase, skills and their needs. Further, during the first week of the commencement of the teaching programme, a few classes are devoted to evaluate the differential requirements of the students. Based on this analysis, students who need extra support are identified for remedial coaching. Bridge courses are offered in certain departments especially where there is an opportunity in the curriculum for the students who hail from educationally disadvantaged classes.

After the first internal assessment test, the students who secure less than 50 per cent of marks are considered slow learners and the rest are treated as advanced learners. The slow learners are given remedial coaching or special coaching both in theory and practical, in order to motivate them and develop interest in their chosen subjects. The fast learners and brighter section of students are motivated to appear for competitive examinations. They are provided computer and Internet facilities to update their knowledge and skills. They are directed to attend workshops and summer courses conducted both at the university and elsewhere. The students with special aptitude for research are motivated to work on individual mini projects funded by grant agencies.

2.2.3 Does the university offer bridge / remedial / add-on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

| S.No. | Faculty | Remedial / Bridge / Add on Courses |
|-------|--------------------------|--|
| 1. | Science | Communication and soft skill development courses Special coaching classes for NET / SLET / GATE |
| 2. | Marine Sciences | |
| 3. | Indian Languages | Coaching classes for UPSC and TNPSC. |
| 4. | Engineering & Technology | Coaching classes for GATE and soft skill development |
| 5. | Education | Special programme for NTI and TRB Examinations |
| 6. | Fine Arts | Special coaching for Communication and soft skill development courses |
| 7. | Agriculture | Soft skill development to B.Sc. (Ag.), B.Sc. (Hort.) Students. Coaching classes for ICAR,UPSC and TNPSC examinations |
| 8. | Medicine | Special coaching for Communication and soft skill development courses |
| 9. | Dentistry | |

These courses are offered to the registered students after working hours on specific days. Besides, all the faculties conduct remedial coaching classes for SC/ST students during evening hours.

2.2.4 Has the university conducted any study on the academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped, slow learners, etc.? If yes, what are the main findings?

Yes. The main impediments to academic growth of the students especially from the disadvantaged and economically disadvantaged sections of the society relate to lack of proficiency in oral communication and writing skills and lack of aptitude and attitude to learning. The University continues to support them with a host of relief measures that include

- flexibility in time frames for payment of fees,
- granting scholarships (both government and endowment sponsored)
- motivation of slow learners by the student counselors to improve their aptitude and attitude towards learning
- supplemental coaching and remedial coaching classes.

The differently-abled students are provided adequate infrastructure facilities in the form of ramps and special toilets besides the use of a scribe in examinations.

2.2.5 How does the university identify and respond to the learning needs of advanced learners?

- Learning needs of the students are assessed by getting constant feedback from the learners at the beginning and at the end of every semester.
- The advanced learners are given extra assistance by providing supplemental information needed for their future prospects. They are also given additional project work dealing with advanced methodologies and approaches.
- They are encouraged to participate in seminars and symposia conducted by other institutions and motivating them to publish technical papers in reputed journals.
- Special coaching for competitive examinations (IAS, IPS and IFS) and UGC-NET / SET / GATE / ICAR fellowships is imparted to advanced learners.

2.3 Teaching-Learning Process

2.3.1 How does the university plan and organise the teaching, learning and evaluation schedules (academic calendar, teaching plan, evaluation blue print, etc.)?

Academic Calendar - The Heads of the Departments of Study in every Faculty draw the academic calendar under the guidance of the Dean to accommodate the process of teaching-learning of theory, practical and field classes for both odd and even semesters. The calendar also caters to the need of in-plant training, village stay, educational tours, and co-curricular activities. However the reopening and closing dates and duration of vacation and intermittent spell of holidays

| | |
|---------------|---|
| Teaching Plan | <p>are finalized in consonance with the University authorities. Additional working days or amendments in the academic calendar are also informed well in advance to students through circulars.</p> <ul style="list-style-type: none"> - The staff offering different courses prepare weekly lesson plans and maintain a record of the weekly schedules to ensure a smooth coverage of the syllabi. The course plan in practical courses is more flexible to suit changing needs. Manuals available in each laboratory serve to expose the facilities and capabilities of each instrument/equipment. |
| Evaluation | <ul style="list-style-type: none"> - The evaluation sequence comprises two segments that include periodical assessment and final assessment. Two mid-semester tests, assignments and seminars constitute the periodical assessment. The end-semester exam forms the final assessment, the aggregate of both serve to evaluate a student in a particular programme. |

2.3.2 Does the university provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

Yes, the course outline and detailed syllabus for every course is defined precisely and provided in the hand book issued to students at the beginning of the programme. The allotment of courses and allocation of teachers for specific academic programmes is well defined even before commencement of the semester. The weekly logs maintained by each faculty reflect time management and effective coverage of the syllabi in addition to exploring innovative assignments in each unit.

2.3.3 Does the university face any challenges in completing the curriculum within the stipulated time frame and calendar? If yes, elaborate on the challenges encountered and the institutional measures to overcome these.

No, except for the loss of working days caused by natural calamities, the curriculum plan goes as per schedule. The institutional measures to overcome challenges include additional classes on Saturdays and extra teaching hours during weekdays.

2.3.4 How is learning made student-centric? Give a list of participatory learning activities adopted by the faculty that contribute to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

The process of learning is a student-centric approach in the sense, written assignments and seminars along with interactive sessions on topics from the curriculum are administered to the students spread over a semester. These activities stimulate the minds of the students for pursuing their academic goals and progress to a path of higher learning. The facilities in the form of audio-visual displays and a serene environment lend a participatory nature and a competitive spirit among the students.

List of participatory learning activities adopted in general are,

- Assignments on specific topics for self-study.
- Seminars with effective use of audiovisuals and improving communication skills.
- Project report preparation and submission
- Experimental learning and Rural Agricultural Work Experience components.
- Providing hands on experience to students with respect to instrumentation, survey, computing, search tools, sampling and specimen preservation.
- Problem solving exercises in the laboratory / industry / field / bedside clinical discussion.
- Extramural and cultural programmes to nurture social aspects of the students and appreciate heritage, tradition, culture, and values.
- CME (Continuing Medical Education) programme.
- Case studies, simulation study, management games, small and medium business exposure, industrial visit, meet the executive program, soft skill development programmes, quiz, elocution, debate and leadership camps.

2.3.5 What is the university's policy on inviting experts / people of eminence to deliver lectures and/or organize seminars for students?

- University permits and encourages teaching staff to organize national / international seminars, conferences, workshops etc. which provides a platform to invite experts / people of eminence to deliver lectures and share their experiences.
- Eminent professors/scientists are invited every year to departments to deliver lectures on current topics under the auspices of Endowment Lecture Schemes, UGC-SAP visiting fellow grants, etc.
- Eminent scientists are also invited to deliver guest lectures by the respective research societies in various faculty/departments.
- Alumni who have distinguished themselves in various fields are also invited to share their experience in an interactive forum organized by alumni associations.

2.3.6 Does the university formally encourage blended learning by using e-learning resources?

The free access intranet connection in the University offers an interactive facility among the departments of study to share and support each others' needs. It provides an impetus to inter-disciplinary research and availing the database for investigative exercises in each other's domain. The students can enjoy the benefits of open source learning materials, online educative resources and special purpose software.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning, open educational resources and mobile education used by the faculty for effective teaching?

- Access to internet facilities
- Monographs, latest books, journals with impact factor etc., in the library for reference
- Exposure through national and international seminars, conferences, and workshops
- The virtual laboratory facility floated in the web by UGC and other premier institutions.
- The open educational resources available through web are assessed by every course teacher and are recommended to the students for further reference after considering its authenticity.
- The e-journals are made available to the student from the Central Library.
- Staff have access to e-resources such as UGC-INFONET, EBSCO, AGRICOLA, CABI
- Utilization of latest technologies and facilities like computer assisted language teaching technology, language speech lab, phonetic lab and other e-learning resources for effective teaching.
- Teleconferencing facilities for demonstration of live surgeries and distant learning.

2.3.8 Is there any designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the university's educational processes?

Yes. The faculty involved in preparing the curriculum attempt to regularly incorporate developments in the various fields from open source access in the syllabi of the different courses to shed light on the recent trends and bestow on the students its influence in understanding the concepts better.

The course teachers as part of the lectures deliberate the lecture notes from eminent professors in institutes of higher learning available as open source material with the students.

2.3.9 What steps have the university taken to convert traditional classrooms into 24x7 learning places?

- Laboratory facilities are open 24 x 7
- Library services are available to the students even after working hours.
- The assignments and experimental calculations engage the students after classes
- Internet with Wi-Fi facility is made available in the campus.
- UGC info-net facility is available in central library.
- E-learning centre is in use by the students to avail digitized materials.

2.3.10 Is there a provision for the services of counselors / mentors/ advisors for each class or group of students for academic, personal and psycho-social guidance? If yes, give details of the process and the number of students who have benefitted.

Yes. Each faculty is assigned a group of students for whom he/she functions as a mentor. The purpose of this practice is to foster a close rapport between the students and the faculty, to provide guidance to students on all academic matters besides personal counselling and to enhance the potentialities of the students.

The main focus of mentorship is to develop the all-round personality of the students and to make them more professionally competent and responsible citizens by the time they leave the thresholds of the University. Each faculty will function as a counsellor for a group of students during the entire period of their study in the University. The teacher will assist the students to cope with the curriculum, understand the University's expectations of its students, participate in co-curricular and extracurricular activities, solve personal issues, as well as groom their skills and aid in personality development. In addition to the mentor, students may also seek counsel from other faculty members.

This practice has led to a better sense of belonging and purpose for the students as evidenced by the declining trend of absenteeism, and a perceivable proactive involvement in the academic and other activities in the department. For the teachers this has provided feedback and introspective review of academic transactions.

The Division of Psychiatry in the Faculty of Medicine takes anti-distress calls any time. The hostel Wardens are accessible to students any point of time in addition to the in house wardens appointed for serving the students round the clock.

| S.No. | Faculty | No. of Students Benefitted | No. of Councillors / Mentors / Advisors | Counsellors: Students |
|-------|--------------------------|----------------------------|---|-----------------------|
| 1. | Arts | 2094 | 70 | 1 : 30 |
| 2. | Science | 1854 | 75 | 1 : 25 |
| 3. | Marine Sciences | 86 | 9 | 1 : 10 |
| 4. | Indian Languages | 262 | 13 | 1 : 20 |
| 5. | Engineering & Technology | 5565 | 185 | 1 : 30 |
| 6. | Education | 849 | 43 | 1 : 30 |
| 7. | Fine Arts | 87 | 9 | 1 : 10 |
| 8. | Agriculture | 2729 | 90 | 1 : 30 |
| 9. | Medicine | 150 | 15 | 1 : 10 |
| 10. | Dentistry | 150 | 15 | 1 : 10 |

2.3.11 Were any innovative teaching approaches/methods/practices adopted/put to use by the faculty during the last four years? If yes, did they improve learning? What were the methods used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

The following innovative teaching approaches/methods are practiced in the university:

- Digital technologies like LCD are used to provide real time animation to present the concepts. Video lessons are used for better comprehension
- Terrain evaluation with 3D visualization, camera attached microscopes are used to display the microscopic objects on the screen
- Workshops for enhancing aptitudes in related topics form part of the discussions
- General, technical and subject related quiz programs are organized
- The course teacher through e-mail supplements students with e-resources

These innovative practices enable better comprehension of the subject, shed inhibitions and promote interaction in the classroom.

2.3.12 How does the university create a culture of instilling and nurturing creativity and scientific temper among the learners?

The University creates an ambience that nurtures creativity and scientific temper in the following ways:

- Make the classroom sessions interactive, thought provoking and challenging
- Cultivate in students critical thinking
- Creative assignments and seminars
- Participation in National and International Seminars, Workshops, Conferences etc., in their field of expertise
- Inviting eminent experts to address and interact with the students to trigger curiosity and the spirit of scientific exploration
- Undertake research projects
- Organize exhibitions on pathbreaking discoveries in science and technology

2.3.13 Does the university consider student projects mandatory in the learning programme? If yes, for how many programmes have they been (percentage of total) made mandatory?

Yes, the curriculum mandates student projects in the curriculum for a wide range of courses.

| S.No. | Faculty | No. of Programmes with Students Project/research as mandatory course | Percentage | Number of projects executed |
|-------|--------------------------|--|------------|--------------------------------------|
| 1. | Arts | M.Phil., Ph.D and D. Lit. (24) | 24.50 | Ph.D. - 24 |
| 2. | Science | Certain PG, M.Phil., Ph.D.(32) | 58.00 | Ph.D. & M.Phil. - 507 |
| 3. | Marine Sciences | M.Sc., M.Phil., Ph.D.(18) | 100 | Ph.D. - 18 |
| 4. | Indian Languages | M.Phil., Ph.D. (8)and D. Lit. | 66.00 | Ph.D. - 8 |
| 5. | Engineering & Technology | B.E. , B.Pharm, M.E. Ph.D.(50) | 100 | 2521 |
| 6. | Education | M.Ed., M.Phil., Ph.D.(14) | 66.00 | Ph.D. - 14 |
| 7. | Fine Arts | M.Phil., Ph.D. (4) | 11.00 | Ph.D. - 4 |
| 8. | Agriculture | B.Sc. (Ag. / Horti.), M.Sc. Ag., Ph.D.(24) | 100 | PG - 540 UG - 2646 Ph.D. - 134 |
| 9. | Medicine | B.P.T. / M.P.T. / Nursing and M.D. | 82 | - |
| 10. | Dentistry | M.D.S. / Ph.D. | 90 | - |

2.3.14 Does the university have a well qualified pool of human resource to meet the requirements of the curriculum? If there is a shortfall, how is it supplemented?

Yes, the teaching faculty of the University comprises specialized fraternity in different fields to address the requirements of the curriculum. However, resources from faculty of other departments support the inter-disciplinary aspects of each department.

2.3.15 How are the faculty enabled to prepare computer-aided teaching/ learning materials? What are the facilities available in the university for such efforts?

The faculty uses the department computers and LCDs for preparing power point and other teaching materials.

Facilities such as audio visual aids, microphone, LCD projector, high resolution cameras, digital document camera, language speech lab, LCD, tape recorder and television are available in this perspective.

2.3.16 Does the university have a mechanism for the evaluation of teachers by the students / alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process?

Evaluation feedback is received from students regularly for all the courses. The pointers raised serve to improve the existing teaching methodology and innovate better teaching practices. The alumni are regularly contacted to identify the strengths and weaknesses and the necessary changes incorporated periodically in the curriculum.

2.4 Teacher Quality

2.4.1 How does the university plan and manage its human resources to meet the changing requirements of the curriculum?

The University offers several opportunities for its faculty to keep abreast of the changing requirements

- In-service training for incumbents
- Compulsory Orientation courses for 28 days
- Refresher courses at constant intervals as per UGC guidelines.
- Honing pedagogical skills with the help of the Faculty of Education
- National and International seminars/workshops to update knowledge on recent trends in research and development.
- Training in lab oriented programmes.

2.4.2 Furnish details of the faculty

| S.No. | Faculty | Professor | Assoc. Professor | Assist. Professor |
|-------|-----------------------------------|-----------|------------------|-------------------|
| 1. | Arts | 43 | 18 | 235 |
| 2. | Science | 44 | 31 | 141 |
| 3. | Marine Sciences | 7 | 6 | 44 |
| 4. | Indian Languages | 7 | 3 | 61 |
| 5. | Engineering & Technology | 96 | 77 | 581 |
| 6. | Education | 20 | 12 | 116 |
| 7. | Fine Arts | 1 | 2 | 67 |
| 8. | Agriculture | 54 | 10 | 183 |
| 9. | Directorate of Distance Education | 26 | 49 | 543 |
| Total | | 298 | 208 | 2480 |

Faculty wise Permanent Teachers in the University

| Highest Qualification | Professors | | Associate Professors | | Assistant Professors | | Total |
|-----------------------|------------|--------|----------------------|--------|----------------------|--------|-------|
| | Male | Female | Male | Female | Male | Female | |
| Arts | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | 36 | 7 | 15 | 2 | 104 | 35 | 199 |
| M.Phil. | - | - | 1 | - | 52 | 23 | 76 |
| PG / Others | - | - | - | - | 14 | 7 | 21 |
| Total | | | | | | | |

| Highest Qualification | Professors | | Associate Professors | | Assistant Professors | | Total |
|-----------------------------------|------------|--------|----------------------|--------|----------------------|--------|-------|
| | Male | Female | Male | Female | Male | Female | |
| Science | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | 31 | 13 | 30 | 1 | 89 | 23 | 187 |
| M.Phil. | - | - | - | - | 14 | 14 | 28 |
| PG / Others | - | - | - | - | 1 | - | 1 |
| Total | | | | | | | |
| Marine Sciences | | | | | | | |
| D.Sc./D.Litt. | 1 | - | - | - | - | - | 1 |
| Ph.D. | 5 | 1 | 5 | 1 | 39 | 3 | 54 |
| M.Phil. | - | - | - | - | 1 | - | 1 |
| PG / Others | - | - | - | - | 1 | - | 1 |
| Total | | | | | | | |
| Indian Languages | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | 5 | 2 | 2 | 1 | 36 | 16 | 62 |
| M.Phil. | - | - | - | - | 6 | 3 | 9 |
| PG / Others | - | - | - | - | - | - | - |
| Total | | | | | | | |
| Engineering and Technology | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | 72 | 17 | 33 | 13 | 102 | 23 | 260 |
| M.Phil. | - | - | 1 | - | 18 | 26 | 45 |
| PG / Others | 7 | - | 25 | 5 | 329 | 83 | 449 |
| Total | | | | | | | |
| Education | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | 17 | 3 | 10 | 2 | 69 | 9 | 110 |
| M.Phil. | - | - | - | - | 32 | 4 | 36 |
| PG / Others | - | - | - | - | 1 | 1 | 2 |
| Total | | | | | | | |
| Fine Arts | | | | | | | |
| D.Sc./D.Litt. | - | - | - | - | - | - | - |
| Ph.D. | - | 1 | - | - | 3 | 1 | 5 |
| M.Phil. | - | - | - | - | - | 1 | 1 |
| PG / Others | - | - | 2 | - | 53 | 9 | 64 |
| Total | | | | | | | |

| Highest Qualification | Professors | | Associate Professors | | Assistant Professors | | Total |
|-----------------------|------------|--------|----------------------|--------|----------------------|--------|-------|
| | Male | Female | Male | Female | Male | Female | |
| Agriculture | | | | | | | |
| D.Sc./D.Litt. | 1 | - | - | - | - | - | 1 |
| Ph.D. | 39 | 14 | 7 | 3 | 102 | 17 | 182 |
| M. Phil. | - | - | - | - | - | - | - |
| PG / Others | - | - | - | - | 55 | 9 | 64 |
| Total | | | | | | | |

2.4.3 Does the university encourage diversity in its faculty recruitment? Provide the following details (department / school-wise).

| Faculty / Department | % of faculty from the same university | % of faculty from other universities within the State | % of faculty from universities outside the State | % of faculty from other countries |
|---------------------------------|---------------------------------------|---|--|-----------------------------------|
| FACULTY OF ARTS | | | | |
| English | 60 | 40 | - | - |
| History | 43.47 | 47.82 | 8.69 | - |
| Political Science & Pub. Admn. | 57.14 | 35.71 | 7.1 | - |
| Economics | 58.13 | 39.53 | 2.32 | - |
| Sociology | 73.33 | 20 | 6.66 | - |
| Commerce | 45.28 | 54.71 | - | - |
| Population Studies | 81.81 | 9.09 | 9.09 | - |
| Business Administration | 77.38 | 22.61 | - | - |
| Library and Information Science | 73.68 | 23.61 | - | - |
| Philosophy | 66.66 | 22.22 | 11.11 | - |
| Centre for Rural Development | - | 100 | - | - |
| FACULTY OF SCIENCE | | | | |
| Mathematics | 43 | 57 | - | - |
| Statistics | 80 | 20 | - | - |
| Physics | 85 | 11 | 4 | - |
| Chemistry | 68 | 29 | 3 | - |
| Botany | 74 | 21 | 5 | - |
| Zoology | 44 | 49 | 7 | - |
| Earth Sciences | 76 | 24 | - | - |

| Faculty / Department | % of faculty from the same university | % of faculty from other universities within the State | % of faculty from universities outside the State | % of faculty from other countries |
|--|---------------------------------------|---|--|-----------------------------------|
| Biochemistry & Biotechnology | 65 | 35 | - | - |
| FACULTY OF MARINE SCIENCES | | | | |
| Centre of Advanced Study in Marine Biology | 81 | 17 | 2 | - |
| FACULTY OF INDIAN LANGUAGES | | | | |
| Tamil Studies & Research | 55 | 42 | 3 | - |
| Sanskrit | - | - | - | - |
| Hindi | 33 | - | 67 | - |
| Centre of Advanced Study in Linguistics | 88 | 6 | 6 | - |
| FACULTY OF ENGG. & TECHNOLOGY | | | | |
| Civil | 77 | 22 | - | - |
| Civil & Structural | 67 | 27 | 5 | - |
| Mechanical | 66 | 30 | 3 | - |
| Manufacturing | 64 | 32 | 3 | - |
| Electrical & Electronics | 60 | 39 | 1 | - |
| Electronics & Instrumentation | 85 | 15 | - | - |
| Chemical | 86 | 14 | - | - |
| Computer Science & Engg. | 44 | 53 | 3 | - |
| Pharmacy | 61 | 9 | 30 | - |
| SCIENCE & HUMANITIES SECTIONS | | | | |
| Mathematics | 34.21 | 60.52 | 5.26 | - |
| Physics | 60.71 | 39.28 | - | - |
| Chemistry | 62.06 | 37.93 | - | - |
| English | 33.33 | 66.66 | - | - |
| FACULTY OF EDUCATION | | | | |
| Education | 72 | 28 | - | - |
| Psychology | 72 | 14 | 14 | - |
| Physical Education & Sports Sciences | 80 | 14 | 6 | - |
| Life Long Learning | 100 | - | - | - |
| | | | | |

| Faculty / Department | % of faculty from the same university | % of faculty from other universities within the State | % of faculty from universities outside the State | % of faculty from other countries |
|---------------------------------------|---------------------------------------|---|--|-----------------------------------|
| FACULTY OF FINE ARTS | | | | |
| Music | 30 | 70 | - | - |
| FACULTY OF AGRICULTURE | | | | |
| Agronomy | 86 | 11 | 2 | - |
| Entomology | 68 | 21 | 10 | - |
| Plant Pathology | 66 | 19 | 14 | - |
| Microbiology | 92 | 7 | - | - |
| Soil Science & Agricultural Chemistry | 71 | 28 | - | - |
| Genetics & Plant Breeding | 70 | 30 | - | - |
| Horticulture | 90 | 9 | - | - |
| Agricultural Economics | 27 | 72 | - | - |
| Agricultural Extension | 56 | 40 | 4 | - |
| Division of Animal Husbandry | - | 71 | 28 | - |

2.4.4 How does the university ensure those qualified faculties are appointed for new programmes / emerging areas of study (Bio-technology, Bio-informatics, Material Science, Nanotechnology, Comparative Media Studies, Diaspora Studies, Forensic Computing, Educational Leadership, etc.)? How many faculty members were appointed to teach new programmes during the last four years?

Positions are advertised in leading dailies with specific requirements for expertise and are recruited through a thorough scrutiny by specially designated Board of Selection comprising subject experts from other universities/institutions. The faculty members are appointed as per the norms prescribed by the UGC / State Government.

2.4.5 How many Emeritus / Adjunct Faculty / Visiting Professors are on the rolls of the university?

| Faculty | Emeritus | Adjunct Faculty | Visiting Professor |
|------------------|-----------------------|-----------------|--------------------|
| Science | Dept. of Chemistry -2 | | 1 |
| Marine Sciences | - | - | 4 |
| Indian Languages | Dept. of Tamil – 1 | - | - |
| Education | - | - | 6 |

2.4.6 What policies/systems are in place to academically recharge and rejuvenate teachers? (e.g. providing research grants, study leave, nomination to national/international conferences/seminars, in-service training, organizing national/international conferences etc.)?

The teachers attend in-service training, orientation and refresher courses organized in the University to recharge and rejuvenate interest. The University promotes “Faculty Improvement Programme” and “Faculty Exchange Programme” for the benefit of teachers. The University encourage teachers to apply for research grants and supports the implementation of such proposals with adequate infrastructure facilities. The teachers are permitted to avail study leave for pursuing research in their field of study.

2.4.7 How many faculty received awards / recognitions for excellence in teaching at the state, national and international level during the last four years?

The University has instituted Best Teacher Award that is conferred on Teachers Day every year to one teacher in each faculty. Dr. K.R. Sankaran, Professor of Chemistry received the Best Teacher Award from Chemical Research Society of India in 2010.

2.4.8 How many faculty underwent staff development programmes during the last four years (add any other programme if necessary)?

The following table shows the list of faculty who underwent staff development programmes during the last four years.

| Academic Staff Development Programmes | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|---|--|----------------|----------------|----------------|----------------|
| Refresher courses | 74 | 99 | 133 | 202 | 154 |
| Orientation programmes | 147 | 207 | 71 | 31 | 66 |
| Other programmes of more than one week duration | 75 | 108 | 67 | 75 | 81 |
| Staff training conducted by the university | Organised by the concerned Dean’s of Faculties whenever necessary. | | | | |

2.4.9 What percentage of the faculty have been

| Faculties | Percentage of the faculty having | | | | | |
|------------------|---|----------------------------------|-------------------------|--|------------------------------|---|
| | Invited as resource persons | Participated in the event | Presented papers | Teaching experience in other universities | Industrial engagement | International experience in teaching |
| Arts | 24 | 100 | 98 | 7 | 2 | 1 |
| Science | 31 | 78 | 80 | 16 | 9 | 1.22 |

| Faculties | Percentage of the faculty having | | | | | |
|--------------------------|----------------------------------|---------------------------|------------------|---|-----------------------|--------------------------------------|
| | Invited as resource persons | Participated in the event | Presented papers | Teaching experience in other universities | Industrial engagement | International experience in teaching |
| Marine Sciences | 70 | 100 | 65 | - | - | - |
| Indian Languages | 100 | 100 | 100 | 66 | - | - |
| Engineering & Technology | 20 | 69 | 45 | 8.5 | 13 | 1 |
| Education | 42 | 66 | 75 | 15 | - | 0.25 |
| Fine Arts | 5 | 20 | 52 | - | - | - |
| Agriculture | 25 | 100 | 85 | 4 | 7 | 1 |
| Medicine | 20 | 60 | 70 | 15 | - | - |
| Dentistry | 40 | 99 | 81 | 20 | - | 4 |

2.4.10 How often does the university organize academic development programmes (e.g.: curriculum development, teaching-learning methods, examination reforms, content / knowledge management, etc.) for its faculty aimed at enriching the teaching-learning process?

The Board of Studies in each department meets bi-annually to discuss and finalise measures through discussions with internal faculty and external experts to make qualitative changes in the curriculum for different courses. The deliberations also make recommendations on question paper setting and other possible examination reforms.

2.4.11 Does the university have a mechanism to encourage

- * **Mobility of faculty between universities for teaching?**
- * **Faculty exchange programmes with national and international bodies?**

If yes, how have these schemes helped in enriching the quality of the faculty?

The University permits and encourages faculty to accept invitations for delivering lectures in colleges, universities and research institutes within India and abroad. The university signs MoUs to facilitate interactive exchange of faculty with Universities abroad for the purpose of keeping pace with the latest technological advancements in different fields. The faculty gain experience by undergoing training through exchange programmes with institutions in US, Australia and Japan.

2.5 Evaluation Process and Reforms

2.5.1 How does the university ensure that all the stakeholders are aware of the evaluation processes that are operative?

Each student is given a handbook informing about the courses, its distribution and method of evaluation and pass criteria at the time of first enrolment into the University.

In addition, orientation classes are conducted to explain in detail and to clarify the doubts if any at entry point itself.

2.5.2 What are the important examination reforms initiated by the university and to what extent have they been implemented in the university departments and affiliated colleges? Cite a few examples which have positively impacted the examination management system.

The University has put several mechanisms in place to ensure that the examination system is foolproof. Preparation of an Ordinance/Manual for the conduct of examinations is an effort in that direction. The ordinance defines the roles and responsibilities of all the stakeholders, protocols and procedures to be followed, and steps to be taken at all levels in the conduct of the examinations. All the forms/proforma for use in the examination process have been drawn out meticulously in standardized formats. Measures to curb malpractices have also been listed together with the penalty and punishment.

Action has been taken to reform the examination system. Optical Marking recognition (OMR) based answer sheets are now in vogue for professional course Entrance examinations to avoid human error besides hastening the process. Answer sheets with OMR based cover page has helped in transferring data to computers besides eliminating manual data entry operation.

2.5.3 What is the average time taken by the University for Declaration of examination results? In case of delay, what measures have been taken to address them? Indicate the mode / media adopted by the university for the publication of examination results (e.g. website, SMS, email, etc.).

Generally four to two six weeks after the final examination, the results are published in the university websites, besides, publication through University and Department level notice boards. For faculties of medicine and dentistry the publication of results follow the MCI and INC schedule.

2.5.4 How does the university ensure transparency in the evaluation process? What are the rigorous features introduced by the university to ensure confidentiality?

The University ensures transparency in both internal and final evaluation.

Internal assessment is done based on the mid semester exams, in which the answer scripts are returned to the students for verification. Evaluation is done by external and internal examiners chosen at random for the final exams and the students are allowed to go for re-totalling, if any discrepancies arise. Mechanisms are now in place to seek revaluation.

To ensure confidentiality: (i) dummy number is adopted in post examination process, (ii) question despatched by the setter is opened in the confidential room rather than by the addressee *i.e.*, Controller of Examinations, (iii) surveillance camera is fixed in evaluation hall, OMR sacnning, paper sorting hall, etc.

2.5.5 Does the university have an integrated examination platform for the following processes?

*** Pre-examination processes.**

Yes. The examination section works in integration with Co-ordinator and Department Heads to schedule the examinations. Student lists are prepared after considering their credit of attendance and except candidates lacking attendance credit below 80%, who are not allowed to sit for examinations, others roll is prepared and announced. These students register themselves for examinations through an online procedure. Arrangement for Invigilators, Squad, Attendance sheet and Hall ticket are made well in advance.

*** Examination process – Examination material management, logistics, etc.**

All the examinations are held at central examination halls to check the malpractices and to ensure transparency. The hall schedule and other arrangements for students are well prepared and announced in advance. The examination materials and logistics are centrally provided by the office of the Controller of Examination involving secretarial staff whereas invigilation is taken care of by teaching staff.

*** Post-examination process – Attendance capture, OMR-based exam result, auto processing, generic result processing, certification, etc.**

All the attendance details are checked precisely on the day of examination and the data are entered for comparison. This helps to cross check the procedure and is followed until the process of mark registration and mark list preparation is completed. The evaluation of answer scripts is also done centrally, mark sheets are placed for scrutiny in a meeting of the Board of Examiners after which the results are published.

2.5.6 Has the university introduced any reforms in its Ph.D. evaluation process?

- Comprehensive Entrance Exam
- Course work as mandated by UGC is introduced in all faculties.
- Mandatory training on research methodology to inculcate best practices in research
- Assessment of research progress every 6 months by departmental research committee
- Presubmission presentation
- One national and one international journal publication in the topic of research is made compulsory for thesis submission.
- Evaluation of thesis by both Indian and Foreign examiners specializing in the area of research.

2.5.7 Has the university created any provision for including the name of the college in the degree certificate?

Yes. The Faculties are clearly mentioned in the Degree Certificate.

2.5.8 What is the mechanism for redressal of grievances with reference to examinations?

The examination system provides for mechanisms to redress and resolve grievances.

- Any grievance regarding examination registration, question paper, certificate, etc. is addressed to the Controller of Examinations through the Head of the Department or Dean of the concerned Faculty.
- As per the existing rules, in case of any grievances regarding evaluation, the student may apply for re-totalling. Further, in the postgraduate level, third evaluation is arranged if the difference of evaluation is more than 10% between the two examiners.

The reforms envisaged include re-evaluation

2.5.9 What efforts have been made by the university to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved the process and functioning of the examination division/section?

Detailed in 2.5.2.

2.6. Student Performance and Learning Outcomes

2.6.1 Has the university articulated its Graduate Attributes? If so, how does it facilitate and monitor its implementation and outcome?

The university articulates its graduate attributes to a productive and meaningful path by inculcating a sense of self-confidence, courage and faithfulness among the students. The University enforces these qualities through classroom teaching, off-campus learning components such as rural service, industrial visits and NSS and NCC camps.

The University provides facilities for improving the soft skills of students to enhance their employability opportunities. Pre-placement training is also provided to students during their final year. Periodical tests are arranged to assess and formulate a mechanism to improve on the aptitude and subject skills.

2.6.2 Does the university have clearly stated learning outcomes for its academic programmes? If yes, give details on how the students and staff are made aware of these?

The learning outcomes are given in the form of aim / objective in the handbook for the different courses. The syllabus content and lecture schedules are designed to inculcate a complete understanding of the subject content both in theory and practical courses and pave the way to adapt to the emerging trends in different courses.

2.6.3 How are the university's teaching, learning and assessment strategies structured to facilitate the achievement of the intended learning outcomes?

The teaching content and lecture schedules are structured to reach the objectives. The teaching-learning activity is assessed through the teachers by conducting periodical class test, mid-semester evaluation and viva-voce component in all the practical examinations.

The practical tests conducted periodically and outstation visits organised, infuses confidence among the students regarding the hands-on skill he/she develops. Finally, the examination of both theory and practicals by external examiners evaluate the depth of knowledge, provide extramural accreditation, and infuse confidence.

2.6.4 How does the university collect and analyse data on student learning outcomes and use it to overcome the barriers to learning?

Each staff member is assessed by the students during every semester through the proforma developed by IQAC cell. This proforma is developed by including the following guidelines.

- Coverage of individual units
- Clarity of expression
- Presentation skills
- Interaction of the teacher with students
- Motivation by the teacher
- Temperament in the classroom
- Uniformity in covering the syllabus content
- Assessment of test papers

2.6.5 What are the new technologies deployed by the university in enhancing student learning and evaluation and how does it seek to meet fresh/ future challenges?

- Constant upgradation of learning and evaluation strategies with support from the Faculty of Education
- Digital resource sharing and online resources are made available for students learning.
- Certain Departments extend field training to the students
- The department reviews and annual academic reports display on record the achievement of teachers during the period of review.

Any other information regarding Teaching, Learning and Evaluation which the university would like to include.

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

Preamble

Annamalai University with its vibrant research focus and technical expertise has constantly been on a growth trajectory. The research and consultancy activities have helped attract substantial funding from a wide spectrum of national and international agencies to the tune of 110 crores during the review period, establish collaborations with prestigious research institutions, foster academy-industry interaction, address issues of social and national importance, spawn inventions, extend service to social organizations and most importantly, led to value addition for faculty and students in the academic world. The significant increase in the quality of publications in the last five years has resulted in the award of the PURSE Programme by the Department of Science and Technology, recognition of Marine Sciences as a Centre for Excellence in Particular Area (CPEPA), and support for 19 departments by UGC-SAP and for 17 departments by DST-FIST.

3.1 Promotion of Research

Research and Extension have always been the core competence of the various departments of study. While the departments in the Faculties of Science and Engineering focus on research areas that are both fundamental and application oriented, the departments in the Arts Faculty undertake research that is of socioeconomic importance. The University plays a proactive role by providing support and ambience conducive for research. The UGC 2009 regulations for Ph.D. course work has been adopted. The University has in-house journals for faculty and research scholars to publish their research work.

3.1.1 Does the university have a Research Committee to monitor and address issues related to research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.

Several Research Committees are constituted for effective coordination of the research activities of the departments. These include

1. **PG Research Advisory Committee** comprising the guide of the student, two faculty members, and the Head of the department concerned. This committee conducts periodical evaluation of the research work of PG students.
2. **Doctoral Committee** consists of faculty members who are Research Supervisors and the Head of the Department as the Coordinator. For the Ph.D. candidates of the HOD, a senior faculty member serves as the Coordinator.

Functions of the Doctoral Committee include

- i) Selection and admission of M.Phil. and Ph.D. students.
- ii) Allocation of Research Supervisors for students enrolled for the Ph.D. programme depending upon the vacancy, the number of students per faculty member permitted by the university, the available specializations among the

faculty supervisors, and the research interest of the student as indicated during the interview by the student.

- iii) Assessment of redundancy of research proposals.
 - iv) Framing the syllabus for course work.
 - v) Evaluation of research progress every six months.
 - vi) Approval of the synopsis of Ph.D. theses.
 - vii) Maintenance of the quality of research.
3. **Research Projects Evaluation Committee** consists of the Director of Research, Dean of the Faculty, Head of the concerned department and two subject experts to examine the technical and financial details of the project proposal submitted for funding as well as aspects of redundancy, intellectual property, and ethics.
 4. **Consortium Advisory Committee (CAC)** or Project Implementation Committee involving institutional and external experts, and stakeholders monitors the activities of Major Research Projects with higher budget provisions and consortium mode of implementation of projects.
 5. **Institutional Animal Ethics Committee (IAEC)** that monitors the conduct of experiments on animals based on the rules laid down by the Committee for the Purpose of Control and Supervision on Experiments on Animals (CPCSEA).
 6. **Institutional Human Ethics Committee (IHEC)** that scrutinizes proposals involving clinical trials and use of human samples for research.

Recommendations and their Impact

1. Doctoral Committee Recommendations: The mandatory requirement of publishing two papers before submission of Ph.D. thesis has resulted in quality publications in journals with high impact factor and improved the H index of the faculty.
2. The recommendations of the Research Projects Evaluation Committee has helped the faculty to improve the quality of their research proposals before submission thereby increasing the success rate of project proposals submitted for funding.
3. The recommendations of the CAC on the ICAR/World Bank funded NAIP Project implemented by the Faculty of Agriculture has led to the formation of commodity interest groups among target beneficiaries and ensured sustainability of the project interventions.

3.1.2 What is the policy of the university to promote research in its affiliated / constituent colleges?

Not Applicable.

3.1.3 What are the proactive mechanisms adopted by the university to facilitate the smooth implementation of research schemes/projects?

Advancing funds for sanctioned projects and Providing seed money

- The Principal Investigators are permitted to draw an advance for the day-to-day expenditure in running the project.
- Although seed money is not provided, necessary infrastructure required for research including laboratory facilities, field, consumables, equipment are provided by the university for faculty who undertake research projects. In UGC-SAP funded departments, additional grant is available for conducting research and to attend workshops and conferences.

Simplification of procedures related to sanctions / purchases to be made by the investigators

- Complicated paper work related to project implementation has been replaced by simple, easy to fill in forms.
- The list of companies approved by the University for purchase of Consumables and Equipment is provided to all the Principal Investigators. Orders for items in the Rate Contract are placed within a week and the same notified to the Principal Investigators.

Autonomy to the principal investigator/coordinator for utilizing overhead charges

The overhead charges are pooled together to augment common research facilities, maintain and upgrade instruments, provide infrastructure, internet and communication facilities, maintenance, payment of utilities bills, and for engaging staff for maintenance of project accounts.

Timely release of grants

The Grants Section and the Finance Office enable the Principal Investigators to submit the Statement of Expenditure and Utilization Certificate within 15 days after the financial year end or as and when required by the funding agency thereby ensuring timely release of the next instalment from the funding agencies.

Timely auditing

- A separate secretarial section maintains project accounts, and all financial transactions related to sponsored research and consultancies.
- The Finance Office verifies the annual and final project accounts and returns the same to the Principal Investigator within two weeks together with a forwarding letter for onward transmission to the funding agency.
- The audited statement of accounts duly certified by Local Fund Audit is submitted to the funding agency after verification.

Submission of utilization certificate to the funding authorities

- The audited utilization certificates are issued by the Local Fund Audit Department at the end of every financial year and timely submission is ensured by the Grants Section of the administrative office of the University.
- All procedures have been streamlined to ensure timely submission of accounts.

3.1.4 How is interdisciplinary research promoted?

Annamalai University with its diverse faculties and wide ranging specializations provides an ideal ambience for interdisciplinary research. The interdisciplinary nature of some of the programmes offered by different departments spawns research activities even at the PG level. Seminars, symposia, workshops and conferences are organized by every department to foster and promote research initiatives across disciplines. The following research collaborations indicate the extent of interdisciplinary research within the University and with other institutions.

* between/among different departments/schools of the university and

| Department | Collaborating Departments | Aspect of Collaboration |
|------------------------------|--|---|
| Agronomy | Marine Biology, Entomology, Horticulture, Plant Pathology, Economics and Division of Animal Husbandry. | Coastal Agriculture & Integrated farming system courses and NAIP research on climate resilient farming systems. |
| Biochemistry & Biotechnology | Chemistry, Physics, Medicine, Marine Sciences, Statistics, Zoology | Testing of bioactive compounds |
| Botany | Chemistry, Medical Microbiology, Zoology | Stress physiology, Transgenic plant re-se-arch and screening of bioactive compounds |
| Chemistry | Biochemistry & Biotechnology, Mechanical Engineering, Microbiology, Pharmacy | Drug discovery |
| Civil Engg. | Agriculture, Chemical Engg., Earth Sciences | Environment, Health & Safety. |
| Earth Sciences | Marine Sciences, Civil Engineering | Geomagnetism, Remote Sensing |
| Economics | English, Commerce, Philosophy, Business Management, Marine Sciences | American Studies, Philosophy of Science, Mangroves |
| Education | Biochemistry & Biotechnology, Psychology Medicine | Exercise Biochemistry, Sports therapy Exercise therapy & rehabilitation |
| Instrumentation Engg. | Medicine, Electrical & Electronics Engg., Manufacturing Engg. Structural Engg. Chemical Engg. | Biomedical Energy Power electronics & Drives and control Material processing, Structural Health Monitoring using MEMS Process Control |
| Linguistics | Tamil, Computer Science, Medicine, Sociology, Psychology | Speech therapy, Natural Language Processing |
| Manufacturing Engg. | Mechanical Engg. | Thermal Study in Composites and Surface Coating in Automobile components |
| Marine Sciences | Biochemistry & Biotechnology, Pharmacy, Dentistry | Marine Bioactive substances |
| Pharmacy | Chemistry, Biochemistry, Medicine, Dentistry | Dental implants & Pharmacy practice. |
| Physics | Chemistry, Biochemistry & Biotechnology | Testing of bioactive compounds |
| Zoology | Biochemistry & Biotechnology, Chemistry, Medical Science and Agriculture. | Sericulture, Vermiculture and Toxicology |

* **Collaboration with national/international institutes / industries.**

| Department | National/International Institutes / Industries | Aspect of Collaboration |
|------------------------------|---|---|
| Chemistry | IASST, Guwahati, Assam, DBT and DST (SERB) collaborative project work with PSG College of Pharmacy CavinKare Pvt. Ltd. Chennai, | Drug discovery Finding new cosmetic ingredients from plant Sources |
| Earth Science | BARC, CESS, IGCAR, CWRDM, JNU Curtin University, University Malaysia | Isotope geology, Geoinformatics, Remote sensing, Hydrogeology, |
| Biochemistry & Biotechnology | <ul style="list-style-type: none"> • <i>Johns Hopkins University</i> • University of Connecticut • <i>Stockholm University, Sweden</i> • The Rolf Luft Center for Research in Diabetes and Endocrinology, Karolinska Institute Sweden • Department of Agrobiological and Agrochemistry, University of Tuscia, Italy. • Vinča Institute of Nuclear Sciences, Serbia • Institut für Umweltcarcinogene (BIU), Grosshansdorf, Germany • Mitsui Norin Co. Ltd., Tokyo, Japan. • Universiti of Malaya • <i>School of Life Sciences, Jawaharlal Nehru University, New Delhi.</i> • Madras Veterinary College, Chennai. • <i>Sree Ramachandra Medical College, Chennai.</i> • Indian Institute of Technology-Madras • National Institute of Nutrition, Hyderabad. • Indian Institute of Science, Bangalore. • Central Institute of Fisheries Technology, Cochin, Kerala. • Wellcare Hospital, Vytilla, Kerala. • Raj Bioengineering • M/S Sami Labs, Bangalore • Osho Biotech • BARC- Mumbai • Indian Institute of Chemical Biology | Micronutrient Research Cardiovascular disease Functional foods, Cytogenetics Functional foods Environmental Carcinogens Tea polyphenols Functional proteomics, clock gene products, <i>Drosophila</i> , mammals Cytogenetics Canine mammary tumors Functional foods Signaling pathways Functional foods Molecular oncology Phytochemical characterization Assessment of tumor markers Anticancer agent testing Testing of antidiabetic agents Proteomics Radiation exposure Neurodegenerative disorders |
| CAS in Marine Biology | <ul style="list-style-type: none"> • School of Biotechnology, Royal Institute of Technology (KTH) • Albanova University Centre, Stockholm, Sweden • Faculty of Natural Sciences, Leibniz University, Hannover, Germany • Penza State Pedagogical University, Penza, Russia • Vietnam Academy of Science & Technology, Cauaiy, Hanoi and • West Coast Hatchery, Cochin, Kerala | Marine Biotechnology / Biodiversity / Environmental Issues |
| CAS in Linguistics | <ul style="list-style-type: none"> • University of Pennsylvania, USA, • University of Cologne, Germany • Central Institute of Indian Languages, Mysore • Central Institute of Classical Tamil, Chennai | Speech therapy / Natural Language Processing and developments in Indian Languages |

| Department | National/International Institutes / Industries | Aspect of Collaboration |
|---|---|--|
| | <ul style="list-style-type: none"> Tamil Virtual Academy, Chennai National Testing Service, Mysore National Translation Mission, Mysore. | |
| Manufacturing Engg. | <ul style="list-style-type: none"> National Institute for Interdisciplinary Science & Technology (NIIST), Kerala. Welding Research Institute (WRI), Tiruchirappalli Indira Gandhi Center for Atomic Research (IGCAR), Kalpakkam Defense Metallurgical Research Laboratory (DMRL), Hyderabad Defense Research and Development Organisation, New Delhi Combat Vehicles Research Development Establishment, Avadi, Chennai. TTK Industries, Chennai | Material Processing / Welding technology |
| Instrumentation Engg. | M/S. Vi Microsystems Pvt. Ltd, Chennai. | Instrumentation |
| Agronomy | <ul style="list-style-type: none"> FAO, United Nations. International Rice Research Institute, Philippines. Institute for Arable Crops Research, Rothamsted Experimental Station, U.K. Natural Product Research Centre, United States, Department of Agriculture, USA Ministry of Agriculture, Iraq Charles Stuart University, Australia | <p>Weed Risk Assessment & Invasive characters of weeds</p> <p>Screening submergence tolerant rice, through STRASA and IFAD.</p> <p>Herbicidal properties of <i>Coleus amboinicus</i> for use in aquatic systems.</p> <p>Allelopathy of weed species for commercial exploitation as herbicides.</p> <p>Training scientists in water hyacinth biocontrol and climate resilient farming system.</p> |
| | <ul style="list-style-type: none"> National Institute of Technology (Tiruchirappalli) & International Institute of Biotechnology and Toxicology (Chennai) | Extraction of cellulose Nano-fibers. |
| | <ul style="list-style-type: none"> Dhan Foundation, Madurai, Vedhapuri KVK and BMT KVK | Livelihood security in disadvantaged districts of Tamil Nadu |
| Horticulture | <ul style="list-style-type: none"> Manonmaniam Sundaranar University, IIHR St, Joseph College- Tiruchirappalli UAS Bangalore MSSRF in Vyanad Kottakal Arya Vaidya salai TBGRI-Trivandrum | Network project on conservation of RET medicinal plants in South India. |
| Electrical, Electronics & Instrumentation, Computer Science & Engg. | <ul style="list-style-type: none"> Tennessee Technological University, Tennessee, USA | Obama-Singh Award Tamil Nadu Energy Futures – Mapping Uncertainties and Risks |

3.1.5 Give details of workshops/ training programmes/ sensitization programmes conducted by the university to promote research culture on campus.

Different departments of the university have organized various workshops/training programmes/sensitization campaigns to motivate and inculcate research aptitude among the staff and students. These programmes include research methodology workshops, training programmes for instrumentation and software skills, and sensitization programmes for current global trends in research. In total, 122 programmes were conducted during the past five years with an average of 25 programmes every year to promote research culture on campus.

The Department of Economics conducts K.S. Sonachalam Memorial Research Methodology Workshop annually to train M.Phil. and Ph.D. students of the entire University drawing faculty from all the departments. Training is imparted on all aspects of research including research design, execution, Good Laboratory Practices (GLP), thesis and paper writing, statistical analysis and applications, oral and poster presentation skills, computer applications for research, and time, material, and stress management.

The University has made special provision under UGC-SAP, DST-FIST, Endowment schemes and other programmes to invite reputed scientists across the world to deliver and interact with the faculty and research scholars.

Details of some of workshops and training programmes conducted by the University are listed below.

| S.No. | Workshops/Training Programmes | Year |
|-------|--|-------------------|
| 1. | K.S.Sonachalam Memorial Research Methodology Workshop | Annual since 1989 |
| 2. | Workshop on "Indeclinable in Indian Languages" on 01 - 10 February 2007. | 2007 |
| 3. | Workshop on "Computer Aided Language Teaching (CALT) 13 - 22 February 2007. | 2007 |
| 4. | International Training Course on Biodiversity in Mangrove Ecosystems | 2007 |
| 5. | Workshop on Automotive Materials | 2007 |
| 6. | Drug Synthesis Strategies | 2007 |
| 7. | Good Dispensing Practices | 2007 |
| 8. | Cosmetics Standard, Regulation and Control: A Growing Need | 2007 |
| 9. | Drug Information Services for Hospital Pharmacists | 2007 |
| 10. | Entrepreneurship Development Programme | 2007 |
| 11. | Organized FAO - Regional Training Workshop for Asia on Weed Risk in collaboration with Food and Agriculture Organization of United Nations | 2007 |
| 12. | UGC (SAP) sponsored National Workshop on Interdisciplinary Approach to an Evaluation of Human Performance | 2008 |
| 13. | UGC Workshop on Psychodiagnostics and Psychotherapeutics | 2008 |
| 14. | TANSCHE workshop on Current issues in practicing psychology | 2008 |
| 15. | Advanced training programme on Application of Remote Sensing and GIS tools for Coastal and Ocean Resource Mapping, monitoring and Management | 2008 |

| | | |
|-----|---|------|
| 16. | International Training Course on Coastal Biodiversity in Mangrove ecosystems | 2008 |
| 17. | Training workshop on isolation and identification of Marine Actinobacteria | 2008 |
| 18. | Workshop on PCR techniques for DNA amplification and disease diagnosis | 2008 |
| 19. | Workshop on Computer aided drug design supported by Schrodinger software solutions, USA | 2008 |
| 20. | National workshop on "Hyper spectral Remote Sensing Applications and Image Analysis" | 2008 |
| 21. | Spatial Modeling and Soft Computing in Water Resources Management | 2008 |
| 22. | Workshop on Seismic Resistance Design and Construction Practices | 2008 |
| 23. | Workshop on Future fuels for low emission engines | 2008 |
| 24. | National workshop on Research Methods for the study of marine benthos | 2009 |
| 25. | UGC Workshop on Identification and management of childhood disorders | 2009 |
| 26. | Workshop on Bar-coding of Marine life | 2009 |
| 27. | Summer Training Programme on Bioprocess Technology (Enzyme Technology) | 2009 |
| 28. | International Workshop on challenges in Biotechnology and food technology | 2009 |
| 29. | Workshop on Design and analysis of Experiments (Response surface methodology) | 2009 |
| 30. | International Training Course on Coastal Biodiversity in Mangrove ecosystems | 2009 |
| 31. | CSIR sponsored National Training Programme on "Hyper spectral remote sensing and Spectral signature Applications" | 2009 |
| 32. | National level workshop" DiaMed Herbs-09" | 2009 |
| 33. | Staff Development Programme on disaster Mitigation and Rehabilitation of Structures (DiMaRoS-2009) | 2009 |
| 34. | Workshop on Concrete Mix Design | 2009 |
| 35. | Staff Development Programme on "Automotive materials and Electronics" | 2009 |
| 36. | International Workshop on Performance Analysis in Football | 2009 |
| 37. | Invasive Alien species workshop on International Science day. | 2009 |
| 38. | Tool construction and validation | 2009 |
| 39. | UGC Workshoop on Neuropsychological assessment and rehabilitation | 2010 |
| 40. | National Symposium on Climate change and Marine Biodiversity | 2010 |
| 41. | National training programme on Enzyme Technology | 2010 |
| 42. | Workshop on Marine Fish Bioacoustics and Marine Bioluminescence | 2010 |
| 43. | International training course on Coastal Biodiversity in Mangrove ecosystems | 2010 |
| 44. | Instructional Workshop on Graph Theory | 2010 |
| 45. | Instructional Workshop on Random Processes and their Applications | 2010 |
| 46. | One day National workshop on Scanning Electron Microscope | 2010 |
| 47. | Training Programme on Role of aqua chemical modeling in water resource pollution | 2010 |
| 48. | Training Programme on Applications of hydro geochemical modeling in water research | 2010 |
| 49. | National Workshop on 'Recent Trends in Chronomedicine' | 2010 |
| 50. | National workshop on "Animal Cell Culture Techniques (ACCT-2010)" | 2010 |
| 51. | Workshop on Concrete Mix Design | 2010 |
| 52. | International Workshop on Geopolymer Cement and Concrete | 2010 |
| 53. | Grid and Cloud Computing (GACC - 2010) | 2010 |
| 54. | Rational Use of Drugs | 2010 |
| 55. | Synthon Approach: The Theory and Practice | 2010 |
| 56. | UGC Workshop on qualitative research | 2010 |
| 57. | UGC Workshop on Counselling skills | 2011 |
| 58. | Workshop on Marine corrosion and surface engineering | 2011 |

| | | |
|-----|---|---------|
| 59. | SAP assisted workshop on instrumental methods | 2011 |
| 60. | Molecular Biology workshop for College Teachers and Research Scholars | 2011 |
| 61. | National Workshop on Plant Biotechnology: RAPD-PCR Techniques” | 2011 |
| 62. | Toxicological Techniques” – TOXITEC – 2011 | 2011 |
| 63. | Conducted National workshop on “GIS at Annamalai University”. | 2011 |
| 64. | One day colloquium on Mineral exploration and mining | 2011 |
| 65. | National workshop on “Animal Cell Culture Techniques (ACCT-2011)” | 2011 |
| 66. | Staff Development Programme on Disaster Mitigation and Rehabilitation of Structures (DiMaRoS-2011) | 2011 |
| 67. | Intellectual Property Rights, Patent Law and Commercialization of Patents | 2011 |
| 68. | National Level Workshop on “ Training Programme for Teachers of Schools and Colleges of Education on Teaching Practice In Cuddalore District” | 2011 |
| 69. | Workshop on “Aspects of Phonology and Morphology in Early Tamil” | 2012 |
| 70. | International Workshop on “Social Inclusion of Person with Disability | 2012 |
| 71. | The Department of Population Studies has organized a ‘SPSS (Statistical Package for Social Sciences) Training Programme for Research Scholars and Teachers’ | 2012 |
| 72. | SPSS (Statistical Package for Social Sciences) Training Programme for Research Scholars and Teachers in Annamalai University | 2012 |
| 73. | Technology Dissemination workshop on Seagrasses and Seagrass mapping using Indian Remote Sensing Satellite Sensors (Seagrass – 2012) | 2012 |
| 74. | Workshop on “Science Career Development (SCD- 2012). | 2012 |
| 75. | Global perspectives on water resources and environment | 2012 |
| 76. | Speech and Image Processing | 2012 |
| 77. | Sensitization programme for community pharmacists on Tuberculosis and DOTS | 2012 |
| 78. | UGC Sponsored National Workshop on “Computer Assisted Statistical Application for Different Experimental Design | 2012 |
| 79. | Sensitization programme on evidenced based practice in Nursing Research | 2012 |
| 80. | Agricultural Research Society | Monthly |
| 81. | Annamalai Agronomists Association | Monthly |
| 82. | Entomology Society Meetings | Annual |
| 83. | Plant Pathology Association | Annual |
| 84. | Society of Biological Chemists [India] Annamalainagar Chapter | Annual |

3.1.6 How does the university facilitate researchers of eminence to visit the campus as adjunct professors? What is the impact of such efforts on the research activities of the university?

The university appoints researchers of eminence as visiting professors of the departments concerned under the auspices of UGC merged schemes. They are paid a consolidated pay of Rs.15,000/- per month as honorarium, and also provided office space and accommodation in the guest house. University encourages them to apply for research grants under its affiliation.

Some of the researchers appointed as visiting professors are

1. Dr. C. Rajamanickam, (Retired Prof) School of Biological Sciences, Madurai Kamaraj University, in Faculty of Science.
2. Dr. Sunil Sazawal, Johns Hopkins University, USA in the Faculty of Science.
3. Dr. T.J. Pandian in Faculty of Marine Science
4. Dr. D. Chandramohan in Faculty of Marine Science
5. Dr. Rajesh Balakrishnan, Departments of Clinical, Social and Administrative Sciences, College of Pharmacy and Health Policy and Management, School of Public Health, at the University of Michigan, USA in Department of Pharmacy.

The adjunct professors deliver lectures on latest trends in the subject, discuss research programmes on thrust areas with students and faculty, contribute to the curriculum, provide hands on training in advanced techniques and guide faculty in submitting research proposals to funding agencies.

3.1.7 What percentage of the total budget is earmarked for research? Give details of heads of expenditure, financial allocation and actual utilization.

Allocation of finance for research is given under the budget heads *viz.*, equipment, laboratory maintenance, chemicals, glassware, maintenance of field units, etc. Percentage budget allocation for research in various faculties is tabulated. The utilization of the fund ranges from 90% to 95%.

| Faculties | Percentage of budget allocation for research | | | | |
|---------------------------|--|---------|---------|---------|---------|
| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
| Arts | 19.53 | 13.55 | 11.51 | 8.42 | 3.23 |
| Science & Marine Sciences | 14.12 | 19.76 | 18.77 | 16.02 | 16.02 |
| Indian Languages | 18.26 | 18.09 | 19.60 | 12.21 | 17.60 |
| Engineering & Technology | 16.40 | 17.70 | 18.86 | 16.32 | 19.73 |
| Education | 4.12 | 12.50 | 1.80 | 3.72 | 2.59 |
| Fine Arts | 17.64 | 12.50 | 1.05 | 12.06 | 12.19 |
| Agriculture | 19.83 | 19.68 | 18.72 | 17.75 | 18.31 |
| Medicine | 8.10 | 6.63 | 6.67 | 10.98 | 9.38 |
| Dentistry | 0.98 | 1.80 | 4.62 | 2.42 | 1.54 |

3.1.8 In its budget, does the university earmark funds for promoting research in its affiliated colleges? If yes, provide details.

Not applicable

3.1.9 Does the university encourage research by awarding Post Doctoral Fellowships/Research Associateships? If yes, provide details like number of students registered, funding by the university and other sources.

The university encourages student research by offering various scholarships, research funds, fellowship, incentives from endowments, etc. The details of research scholars benefitted from these funding are tabulated.

| Fellowship | No. of Students | Amount in Rs. |
|---|------------------------|--|
| University Funds | 69 | 16,90,000 |
| UGC Fellowship | | |
| UGC-Non SAP (BSR) – RFSMS Fellowship | 34 | 61,94,000 |
| UGC-RGNF | 65 | 16,000 (p.m. for JRF) 18,000 (p.m. for SRF) |
| UGC-PG Scholarship for Professional Courses for SC/ST | 33 | 47,76,000 |
| Other Financial Support Schemes | | |
| ICMR | 22 | 39,57,385 |
| ICAR / DBT / MWR / Fellowship | 27 | 3,78,000 |
| CSIR | 06 | 15,09,633 |
| DST Inspire Fellowship-New Delhi | 10 | 35,05,600 |
| Govt. of India, BPR & D Fellowship, New Delhi | 01 | 1,09,000 |
| ICHR, New Delhi | 01 | 36,000 |
| Central Institute of Classical Tamil, Chennai | 03 | 4,32,000 |
| Endowments (44 nos.) | 438 | 8,05,674 |

3.1.10 What percentage of faculty have utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the university monitor the output of these scholars?

Four teaching faculty have availed sabbatical leave so far. The teachers submit a detailed report on completion of sabbatical leave together with evidence of publications.

3.1.11 Provide details of national and international conferences organized by the university highlighting the names of eminent scientists/scholars who participated in these events.

Annamalai University is one of the most dynamic institutions with respect to providing a platform for promoting research activities on campus by organizing various national and international conferences/symposia/seminars/workshops throughout the year. During the assessment period, 198 seminars/conferences were organised and around 330 eminent scientists/personalities have participated in these programmes. On an average 40 seminars/conferences were organised, every year. Some of the eminent scientists/scholars who participated in these events are listed.

Faculty of Arts

Prof. Ernest desil Run, Sweeden, Dr. K. Balachandran, Prof. and Head, Dept. of English, M.S. University. Dr. K. Chellappan, Director, State Institute of English, Chennai, Dr. Faqrudin, President, Indian Poet's Congress., T. Subramanyam Naidu, Director, Center for Study of Social Exclusion and Inclusive policy, Pondicherry University, Dr. N. Jeyaram, Dean, Tata Institute of Social Science, Deonar, Mumbai, Dr. M. Ramadass, Ph.D., Director, Studies, Educational Innovation and Rural Reconstruction, Pondicherry University, Dr. K. Mariyappan, Hon'ble member State Human Rights Commission, Tamil Nadu, Dr. S. Baskaran, Member Secretary, TANSCH, Chennai, Dr. Raja Mohamed, Assistant Director or Museum (Rtd), Dept. of Museums, Chennai, Dr. B. Sobhanan, Professor of History, University of Kerala. Dr. Bernard 'D' Sami, Professor of History, Loyola College, Chennai, Dr. V. Vijayakumar, Vice-Chancellor, Tamil Nadu Dr. Ambedkar Law University, Dr. Bernard 'D' Sami, Professor of History, Loyola College, Chennai, Dr. P.H. Reddy, Population Research Centre, Bangalore, Dr. N. Adinarayana Prof. of Population Studies, Dr. M. S. Sulaja, Kerala University, Dr. B. Mahadevan, Director, IIM Bangalore, Prof. Bala Balachandar, Founder Great lakes Institute, Chennai, Prof. Xavier, Present IIM Director Indore, Dr.N.Ravichandran, Director IIM, Indore, Mr. Chandreswarakhan, Vice-President, Tata Motors, Mr. V. Senthil, Scientist, DESSIDOC, Delhi, Dr. S. Muralidhar, Scientist, DRDO, Avadi, Dr. P. Ushadevi, Scientist, Institute of Mathematical Sc., Chennai, Dr. K. Sugumar, Scientist, Indra Gandhi Atomic Research centre, Chennai, Dr. Ramjee Singh, Hon'ble President, ICSP, Former vice-chancellor, Jain Viswa Bharati & Ex. Member of Parliament, Bhagalpur. Dr Rammanohar Reddy, Editor, *Economic And Political Weekly*, Dr A.R. Vasavi, Nehru Memorial Museum and Library, Dr Amita Baviskar, Delhi School of Economics, Dr Sudha Narayanan, IGIDR, Mumbai, and Dr Reetika Khera, IIT- Delhi.

Faculty of Science

Dr.T.Ramasami, Secretary, DST, Ministry of Science and Technology, New Delhi.

Dr. A.R.Jayakumar, Department of Pathology, University of Miami Miller, USA, Dr. A.T. Natarajan, Professor, Leiden University, Netherlands, Dr. Jenssen, Dr. Hag doost, Dr. Mats-Ringdahl, Dr. Tornqvist, Stockholm University, Sweden. Dr. Joksic, VINCA Institute, Serbia, Dr. Kirstein Brismar, Dr. Gustav Karolinska Institutet, Sweden, Dr. Naranjan S. Dhalla, Faculty of Medicine, University of Manitoba, Canada, Dr. Nilanjana Maulik, University of Connecticut Medical Center, USA, Dr. Ramesh Bhonde, Stempeutics Research Malaysia, Kuala Lumpur, Malaysia, Dr. Palitti, University of Tuscia, Italy, Dr. Subbiah Pugazhenthii, Colorado, Denver, USA, Dr. A.J. Rao, Raja Ramanna Emeritus Professor, Dr. Anjali Karande, Dr. H.S. Savithri, Dr. Muniyappa, Dr. P.Kondaiah, Dr. P.B. Seshagiri, Dr. R. Jayaraman, Indian Institute of Sciences, Bangalore, Dr. B.N. Pandey, Head, Radiation Biology & Health Sciences Division, BARC, Dr. Velmurugan, Department of Biophysics, Madras University, Dr. D. Ramasamy, Crystallographic Center Chennai (SSN), Chennai, Dr. D. Karunakaran, Dr. Mukesh Doble, Dr. Rama S. Verma, IIT-Madras, Dr.C.J.Jagadeesha, ISRO, Bangalore, Dr.A.Manoharan, CPCB, Delhi, Dr.S.Marimuthu, Scientist, CECRI, Karaikudi, Dr.P. Giridhar, CFTRI, Mysore, Dr.Tasneem Abbasi, Pondicherry University, Dr.V.K.Venkataramani, TANUVASU,

Dr.M.Deecaraman, Dr. MGR University Chennai, Dr.M.C.Sathiyararayanan, Maharishi Dayan, Sahar University, Dr. M. A. Akbarsha Director & Chair, Mahatma Gandhi-Doerenkamp Center, Bharthidasan University, Trichy.

Faculty of Indian Languages

Dr Natarajan, Dean –Faculty of Indian Languages, Pondicherry University, Poet' Erode Thamizhanban, former Professor Chennai, Critic Thiru Pazha. Karupiah, Karaikudi, Dr E. Sundaramoorthy, Former Vice-Chancellor, Tamil University, Thanjavur, Dr Sayabu. Maraikkayar, Professor, Aringnar Anna Arts College, Karaikal, Poet Tamizhachi Thangapandian, Poet Kasi Ananthan, Poet Arivumathi, Perungkavikko Abdhul Rahman, Nellai S. Kannan, Prof.K.S.Rajashree CIIL, Mysore, Prof.G.Umamaheswara Rao, CALTS, University of Hyderabad, Dr.B.Ramakrishna Reddy, Telugu University, Hyderabad, Dr.L.Ramamoorthy, CIIL, Manarugangori, Mysore, Dr.M.Jayakumar, Bharathiyar University, Coimbatore, Dr.Rajendran, Dravidian University, Kuppam, Dr.R.Kothandaraman, CICT, Chempauk, Chennai, Prof.Punal.K.Murugaiyan, CAS in Linguistics, Annamalai University, Dr.K.H.Dhiren Singha, Assam University, Silchar, Prof.Ch.Sanjeeva Kiakatoge University, Warangal, Dr.K.Karunakaran, Emeritus Fellow, Dr. Mathudhawan, President, Tamilnadu Hindi Sahitya Academy Chennai, Dr. Divik Ramesh, Principal, Mothilal Nehru College, New Delhi, Dr. I.N.Chandrasekar Reddy, Dean Faculty of Oriental Learning S.V.U, Tirupath, Dr. Sanjeevi, Dean Faculty of Oriental Learning Kakateeya University, Warangal, Dr. B. Mohini, Dept of Correspondence Education, Andhra University, Visakhapatnam.

Faculty of Engineering and Technology

Prof. B. Vijaya Rangan, Curtin University of Technology, Perth, Australia, Prof. P. Paramasivam, National University of Singapore, Mr. R. Perumalsamy, Buro Engg. Pvt. Ltd. Consultant, Singapore Prof. Joseph Davidovits, Geopolymer Institute, Saint Quentin, France, Prof. Shem-en-chen, University of North Carolina at Charlotte, USA, Prof. K.N. Krishnan, Charles Darwin University, Australia, Dr.Young-Chae Song, Professor of Environmental Engg, Korea Maritime University, Vusan, Korea, Prof.Christian Kennes, Univ La Coruna, Spain, Dr. Nagesh R Iyer, CSIR-SERC, Chennai, Dr. P. Vijayaraju and Dr. K.S. Venkatakrishnan from Anna University, Dr. S. Thayumanavan, Former Director, Centre for Environmental Studies, Anna University, Dr. A.N. Bhowmick, Member Secretary (Retd.), Ministry of Water Resources, Govt. of India, Dr. Mysooru. R. Yadupathi Putty, Professor, NIE, Mysore, P.N. Nair, IAS., Secretary to Former President Dr. A.P.J. Abdul Kalam, Dr. N. Lakshmanan, CSIR-SERC, Dr.C.V.Vaidyanathan, CSIR-SERC, Chennai, Mr.K.K.Kamalakkannan, General Manager, UTRACON structural systems, Chennai, Dr. M. Neelamegam, Director Grade Scientist, CSIR-SERC, Chennai, Mr. J.Anbu, General Manager, DLF, Chennai, Dr. R.V. Ravikrishna, IISC, Bangalore, Mr.A.Fredrick Mico-Bosch, Bangalore, Mr.K.J.Ramesh,General Motors,Bangalore, Mr.K.K.Bhagat, Reckers Automation, New Delhi, Dr.V.K.Saraswat, Chief controller, R&D (Miss), DRDO, New Delhi, Prof.S.Govindarajan, Former Persident Operation, UCAL Fuel Syetems,

Dr.S.Dhandapani, Former Head,CIT,Coimbatore, Dr. M.A. Mutthu Manickam, Scientist ,Ministry of Defence, DRDO, CVRDE, Chennai, H.Rabibunnisa, Scientist E, Mechanical Systems Laboratory, Combat Vehicles Research and Development Establishment, DRDO, Ministry of Defence,Chennai, Mr.P.V.Krishnan, Senior Manager, Materials dept. Royal Enfield, Chennai, Dr. Thundil Karupparaj, Group Leader ,Robert Bosch India Ltd,Coimbatore, Mr.Sriram Venkataraman, Group Leader, General Motors Corporation, Powertrain Controls, GM Technical Center India Pvt. Ltd. ITPL,Bangalore, Mr. S. Thelaivai Venkataesan, Head-Engg, Power Train, Continental automotive Comp. (I) Pvt.Ltd., Bangalore, Mr. S. Prasanna & Team, Trident Techlabs, Bangalore, Mr. Baskar/Mr. Siddharthan, Sr.FAE, Chennai, Mr. Naveen, Sr. FAE, Bangalore, Mr. Sashupraveen, Sr. FAE, Bangalore, Dr. N. Saravanan, Manager Alternative Research Valley, Mahindra & Mahindra, Alternative Fuels and advanced technologies, Mahindra & Mahindra, Chennai, Dr.P.V. Anantha Padamanaban, BARC, Mumbai, Dr. BC. Pai, Dr.UTS. Pillai, National Institute of Interdisciplinary Science and Technology (NIIST, Kerala, Dr. BC. Pai, Dr.UTS. Pillai, National Institute of Interdisciplinary Science and Technology (NIIST, Kerala, Dr. N. P. Gopalan, NIT, Tiruchirappalli, Dr. S. Sakthivel, Alagappa University, Dr. M. Ponnaivaikko, SRM University, Dr.T.Ramasami, Secretary, DST, Ministry of Science and Technology, Mr.Ajay Shah, Senior Vice President (Polymer) Reliance Industries Ltd., Mumbai, Mr.Ramana, Minister for Environment, Tamil Nadu.

Faculty of Education

Professor Dr. Piyush Swamy, Director, Center for International Education and Research University of Cincinnati, USA, Dr. Harry G Miller, Leadership Development Group USA, Dr. Tien-Hui Chiang, Dean, Faculty of Education, National University of Tainan, Taiwan, Dr. Rong-Kwey Tasy, Dean, Faculty of Social Sciences, Chia Nan University, Taiwan, Dr. Karpagakumaravel, Vice-Chancellor Madurai Kamaraj University, Dr. Veeramani, Registrar, Tamilnadu Teacher Education University, Chennai, Dr. K. Balasubramanian, CEO, Tiruchirappalli, Dr. Karthikeyan, NIEPMD, Chennai, Dr.Neerada Chandramohan, NIEPMD,Chennai, Dr. L.R. Vaithianathan, Principal & Secretary Bangalore University, Dr. M. Robson, Former Dean, LNCPE Gwalior, Dr. Sebastin, Sport Scientist SAI, Bangalore

Faculty of Agriculture

Dr. Robert Zeigler, Director General, International Rice Research Institute, Philippines, Dr. Ricardo Labrada Romero, Weed Officer FAO, Rome, Dr. Chaxian Zhang, Director, CAAS, China, Dr. Yohiharu Fujii, Project Leader, NIAES, Tsukuba, Japan, Dr. Guunito Burian, Philippines, Dr. Siriporn Zungsantiporn, Thailand, Dr. U.S. Singh, South Asia Regional Co-ordinator, STRASA, IRRI, Dr.Eldad Sokolowski, from International Potash Institute, Switzerland, Dr. Parthiba Balasubramanian, AFRC, Canada, Dr. Balakrishnan Prithviraj, Dalhousie University, Canada, Dr. Brian, Dalhousie University, Canada. Dr. Kantha Raja, Western Sydney University, Australia, Dr. C. Palaniappan, Vice-President, Life Technologies, USA, Dr. Satish, Sr. Social Development Specialist, World Bank, Dr. Arvind Kumar, DDG

(Education), ICAR, Dr. K.D. Kokate, DDG (Ext.), ICAR, Dr. H.P. Singh, DDG (Hort.), ICAR.

Faculty of Marine Sciences

Dr. Arun Chokalingam, Director, NHLBI, Bethesda, Washington, Dr. K. Gunasekaran, Director (Admn), University Grants Commission, New Delhi, Dr. M. Sudhakar, Advisor, Ministry of Earth sciences, New Delhi, Dr. C. Devakumar, Assistant Director General, Education Planning & Development, and Editor – NAAS, ICAR New Delhi, Tmt. M.P. Nirmala, I.A.S., Secretary to Govt. of Tamil Nadu, Dept. of Animal Husbandry, Dairy & Fisheries, Chennai, Dr. R. Paul Raj, Member Secretary, Coastal Aquaculture Authority, Govt. of India, Tamil Nadu, Dr. P.S. Roy, Deputy Director, Remote Sensing & GIS Application Area, NRSA, Hyderabad, Dr. E. Vivekanandan, Officer-in-charge, CMFRI, Chennai., Dr. K. Padmakumar, Professor & Head, Dept. of Aquatic Biology & Fisheries, University of Kerala.

Faculty of Medicine

Dr. Arun Chockalingam, Director, Office of Global Health, NHLBI, Maryland USA, Prof. Yukio Yamori, Director, Mukogawa Women's University Institute for World Health Development, Hyogo Japan, Prof. Gerald Simkus, Program Medical Director, Cardiac Sciences of the Fraser Health Authority, New Westminster, Canada, Prof. Arun Garg, Program Medical director, Fraser Health - Laboratory Medicine & Pathology, New Westminster, Canada, Dr. Diane I. Meherbani Desrochers, Teacher/trainer My Health-My Choice Holistic Service, Ontario, Canada, Prof. Ertugal Ercan, Professor Of Cardiology, Canakkale Onsekiz Mart University, Turkey, Prof. P.S.Reddy, Professor of Medicine, MediCiti Institute of Medical Sciences (MIMS), USA, Dr. Jagat Narula, Philip J. and Harriet L. Goodhart, Chair in Medicine and Cardiology, Mount Sinai School of Medicine, New York, Dr. Zhang Xinhua, Board member of the World Hypertension League, Beijing, China.

3.2 Resource Mobilization for Research

3.2.1 What are the financial provisions made in the university budget for supporting students' research projects?

The University admits students to the M.Phil. and Ph.D. programmes after conducting an entrance examination followed by an interview as per UGC guidelines. Research is largely sustained by extramural funding. Many of the students receive financial support from national funding agencies such as UGC, CSIR, ICMR, ICSSR, RGNF, and Minority Fellowships. However, the University also provides substantial funds through scholarships and endowments instituted for student research. Although it is difficult to strictly compartmentalise the university budget allocation for teaching and research, the funds under the heads equipment, consumables, field research units in experimental farm, orchard, dairy, books and journals in library and computer software for data analysis are used to support PG, M.Phil., and Ph.D. research projects. In

recognition of the research contribution made by the University, the UGC has granted fellowships to promote potential for research among meritorious undergraduate students.

3.2.2 Has the university taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

The university encourages its faculty to file patent applications for IPR emanating from research programmes. The teachers are given due weightage for the patents filed and recognised through awards, points for career advancement, etc.. Following are the details of patents applied in the affiliation of the university.

| S. No. | Details of Patents Filed and accepted |
|--------|---|
| 1. | Patent (National): A process for preparation of a novel compound 3-hydroxymethyl xylitol with antidiabetic activity (2008). |
| 2. | Fungal Chitosan (Application No 1288/CHE/2008 date 27/05/2008). |
| 3. | Hepatoprotective Agent From Dehydrated Poultry Waste (Or) Litter (Application No. : 2243/CHE/2006 dated 4/12/2001). |
| 4. | Tempo mediated extraction of nanofibres from aquatic weeds (File No. 62/10 of DST dated 11.08.2010) |
| 5. | Title: Black tea polyphenols and uses thereof. International Publication Number: WO2007/038291 A1. Applicants: Mitsui Norin Co. Shizuoka, Japan and Annamalai University, India. |
| 6. | Improved synthesis of 2-hydroxy naphthoquinone (Lawsone) and its analogues. (Patent Number: 2140/CHE/2009 dated 04-09-2009) |
| 7. | Dendrite elongation inhibition agents from artocarpus altilis (Bark). (Patent Number: 632/CHE/2010 dated 10-03-2010) |
| 8. | A skin lightening agent inhibiting dendrite elongation from Crotalaria medicaginea. (Patent Number: 3045/CHE/2011 dated 05-09-2011) |
| 9. | Novel Iridium (III) complexes (PATENT NO 3212/CHE/2010). |
| 10. | Extraction of cellulose nano fibers from water hyacinth jointly with IIBAT, Chennai, through DBT, Ministry of Science and Technology, GOI. (File No. 62/10 of DST dated 11.08.2010) |

3.2.3 Provide the following details of ongoing research projects of faculty:

In addition to the departmental support by UGC-SAP and DST-FIST, most of the faculty have mobilized individual grants. During the review period 2007-12, 336 new projects were sanctioned to the tune of Rs. 68 crores. The abstracted details of ongoing research projects are given in the Table below. The major funding sources for research and developmental activities in the university are UGC, DST, DBT, MOEN & F, ICAR, ICMR, CSIR, DRDA, ICSSR, MOES, and others. The contribution of research grants from these agencies is 32.4 per cent from UGC, 21 per cent from DST, 14 per cent from MoENF, approximately 6 per cent from DBT and MoENF, and 14 per cent from other funding

agencies such as ICAR, ICMR, CSIR, DRDA, and others. Consultancy accounts for 5 per cent of ongoing projects. The details of the projects are given in the departmental profiles.

| S.No. | Funding Agency | No. of Projects | Amount (Rs.) | Percentage |
|--------------|----------------|-----------------|------------------|------------|
| 1 | UGC | 188 | 219219764 | 32.20 |
| 2 | DST | 33 | 144950767 | 21.29 |
| 3 | MoES | 12 | 97936953 | 14.39 |
| 4 | DBT | 10 | 45074350 | 6.62 |
| 5 | MoENF | 12 | 41653670 | 6.12 |
| 6 | Others | 47 | 96558179 | 14.18 |
| 7 | Consultancy | 34 | 35406433 | 5.20 |
| Total | | 336 | 680800116 | 100 |

3.2.4 Does the university have any projects sponsored by the industry / corporates? If yes, give details such as the name of the project, funding agency and grants received.

The university has 34 industry/corporate sponsored projects most of which are on environmental issues, chemical processing, and assessment of marine biodiversity. sponsored by industries and corporates. The total outlay of these projects works out to a sum of Rs. 3,54,06,433/- . The details are:

| S. No. | Title of the Project | Funding Agency | Amount Sanctioned Rs. |
|--------|--|--|-----------------------|
| 1. | Identification of active molecules with potential for use in personal care and other application | CavinKare, Pvt. Ltd., Chennai | 2895430/- |
| 2. | Assessment of coastal and marine biodiversity in and around Kudankulam in Tamil Nadu | BRNS, Mumbai | 29,98,750/- |
| 3. | Assessment of coastal and marine biodiversity | Sindya Power Corporation Ltd., Chennai | 4,05,000/- |
| 4. | Assessment of coastal and marine biodiversity | Dredging Corporation of India | 1,00,00,000/- |
| 5. | Biodiversity status of path finder inlet and adjacent areas and evaluations of ecological impacts of proposed evolutions of marine terminal of Essar at Vadinal, Gujarat | VOTL VDTL, Gujarat | 10,00,000/- |
| 6. | Turtle survey made at Orissa coast | Indomer Coastal Hydraulics Ltd. | 2,00,000/- |

| S. No. | Title of the Project | Funding Agency | Amount Sanctioned Rs. |
|--------|---|--|-----------------------|
| 7. | Maximum allowable concentration of ammoniacal Nitrogen and total nitrogen to the marine environment | Pioneer jellice Indian Private Ltd. | 1,20,000/- |
| 8. | Measurement of wave tide and current characteristics of the proposed ship building yard in Cuddalore District Tamilnadu | M/s. Good Earthship Building, Chennai | 10,00,000/- |
| 9. | Risk Analysis & Risk Management Plan Veerapandi CETP, Tiruppur | Veerapandi CETP, Tiruppur | 3,00,000/- |
| 10. | Risk Analysis & Risk Management Plan Karaipudur CETP, Tiruppur | Karaipudur CETP, Tiruppur | 3,00,000/- |
| 11. | Risk Analysis & Risk Management Plan Mannarai CETP, Tiruppur | Mannarai CETP, Tiruppur | 3,00,000/- |
| 12. | Risk Analysis & Risk Management Plan Andipalayam CETP, Tiruppur | Andipalayam CETP, Tiruppur | 3,00,000/- |
| 13. | Risk Analysis & Risk Management Plan Angeripalayam CETP, Tiruppur | Angeripalayam CETP, Tiruppur | 3,00,000/- |
| 14. | Risk Analysis for M/s. Pondicherry Nitrous Oxide Pvt. Ltd., Puducherry | M/s. Pondicherry Nitrous Oxide Pvt. Ltd., Puducherry | 50,000/- |
| 15. | GPS. Maps info Consultancy for Veerapondi CETP, Tiruppur | Veerapondi CETP, Tiruppur | 2,50,000/- |
| 16. | GPS. Maps info Consultancy for Mannarai CETP, Tiruppur | Mannarai CETP, Tiruppur | 1,50,000/- |
| 17. | GPS. Maps info Consultancy for Andipalayam CETP, Tiruppur | Andipalayam CETP, Tiruppur | 1,50,000/- |
| 18. | ETP - Augmentation Consultancy as Project Management Consultants for M/s. Ponlait, Puducherry. | M/s. Ponlait, Puducherry. | 2,50,000/- |
| 19. | EIA/EMP for SIPCOT Industrial Park, Thervoykandigai, Chennai | SIPCOT Government of Tamilnadu, Chennai | 7,50,000/- |
| 20. | EIA / EMP for SIPCOT Industrial Park, Pillaipakkam, Chennai. | SIPCOT Government of Tamilnadu, Chennai | 4,50,000/- |
| 21. | AAQM for Three Project FLC Project locations | WAPCOS, New Delhi | 2,00,000/- |
| 22. | EIA / EMP for M/s. Marg. Port, Mugayur | Marg Swarnaboomi. Chennai | 20,00,000/- |
| 23. | AAQM for Cheyyur Power Project | WAPCOS, New Delhi | 4,00,000/- |
| 24. | Additional Environmental Studies for EIA towards Fishing Harbor at Poombuhar | Department of Fisheries, Govt. of Tamilnadu | 2,00,000/- |

| S. No. | Title of the Project | Funding Agency | Amount Sanctioned Rs. |
|--------|--|---|-----------------------|
| 25. | INTER SECTORAL EIA for ICZMA for Tamilnadu Coast | DHI India, Directorate of Environment, Govt. of Tamilnadu | 29,00,000/- |
| 26. | Augmentation Methodology for the Existing Common Effluent Treatment Plant & Technical Arbitration for Angeripalayam CETP, Tiruppur | Angeripalayam CETP, Tiruppur | 10,00,000/- |
| 27. | Vallam-Vaipar Industrial Park, Sriperumpudur Taluk, Kanjeeपुरam District | SIPCOT, Govt of Tamilnadu | 6,00,000/- |
| 28. | Vaipur-Mathur Industrial Park, Sriperumpudur Taluk, Kanjeeपुरam District | SIPCOT, Govt of Tamilnadu | 6,00,000/- |
| 29. | Wind Tower commissioning and erection at Port Novo, (Parangipettai) | CSIR-SERC, Chennai | 10,00,000/- |
| 30. | Evaluation of new herbicide molecules for varied cropping patterns. (Nine independent projects) | Bayer, Dow Agrosience and Tropical Agrosystem | 14,07,000/- |
| 31. | Studies on Bioefficiency of humic plus and formula plus on cotton and bhendi | M/s Agro Sci. Lab., Vadalur, TN | 25,000/- |
| 32. | Fertility mapping through spatial variability in rice growing soils of Cuddalore Dt. | (IPNI), India | 2,00,000/- |
| 33. | Assessment of potassium on turmeric at different farmers location inceptisols | IPI -Switzerland | \$ 3450 1,50,000/- |
| 34. | Effect of sulphate of potash on the yield and quality of rice | Pot. Res. Inst, India, Gurgan | 1,05,000/- |

3.2.5 How many departments of the university have been recognized for their research activities by national / international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.

The research contributions of the faculty, the extent of collaborations and the proactive support by the University has resulted in 19 departments being recognized for financial support by UGC-SAP, and 17 for DST-FIST with some departments receiving support from more than one source.

A notable achievement is the recognition of the University by the DST based on the 'h-index' for the Promotion of University Research and Scientific Excellence [PURSE].

The number of departments recognized for their research activities by National / International agencies through the schemes like UGC SAP, CAS, DST-FIST, etc. are tabulated below.

| Recognition | Department(s) | Amount Sanctioned (in Rs.) |
|----------------------------|--|----------------------------|
| UGC-SAP- 19 | 1. Agricultural Botany | 50,00,000 |
| | 2. Agronomy | 43,50,000 |
| | 3. Biochemistry & Biotechnology | 70,00,000 |
| | 4. Botany | 69,00,000 |
| | 5. Chemistry | 45,00,000 |
| | 6. Civil Engineering | 26,00,000 |
| | 7. Economics | 40,00,000 |
| | 8. Education | 32,00,000 |
| | 9. Genetics & Plant Breeding | 50,00,000 |
| | 10. Instrumentation Engineering | 50,00,000 |
| | 11. Library Science | 19,00,000 |
| | 12. Linguistics | 25,50,000 |
| | 13. Manufacturing Engineering | 42,00,000 |
| | 14. Marine Biology | 96,50,000 |
| | 15. Mathematics | 37,47,941 |
| | 16. Pharmacy | 41,00,000 |
| | 17. Physical Education & Sports Sciences | 31,00,000 |
| | 18. Sociology | 31,50,000 |
| | 19. Zoology | 59,50,000 |
| UGC Innovative Programme s | 1. Chemical Engineering | 50,00,000 |
| | 2. Manufacturing Engineering | 58,00,000 |
| | 3. Pharmacy | 50,00,000 |
| | 4. Electronics and Instrumentation Engineering | 60,00,000 |
| UGC-CPEPA | Marine Biology | 38,50,000 |
| DST-FIST- 17 | 1. Agronomy | 30,00,000 |
| | 2. Biochemistry & Biotechnology | 41,50,000 |
| | 3. Botany | 85,50,000 |
| | 4. Chemical Engineering | 45,00,000 |
| | 5. Chemistry | 2,00,00,000 |
| | 6. Earth Sciences | 60,00,000 |
| | 7. Genetics & Plant Breeding | 35,00,000 |
| | 8. Horticulture | 30,00,000 |
| | 9. Instrumentation Engineering | 61,00,000 |
| | 10. Manufacturing Engineering | 3,80,00,000 |
| | 11. Marine Biology | 1,35,00,000 |
| | 12. Mathematics | 5,66,500 |
| | 13. Mechanical Engineering | 21,96,000 |
| | 14. Pharmacy | 55,00,000 |

| Recognition | Department(s) | Amount Sanctioned (in Rs.) |
|-------------------------|------------------------------------|----------------------------|
| | 15. Physics | 44,00,000 |
| | 16. Soil Science & Agrl. Chemistry | 38,00,000 |
| | 17. Structural Engineering | 1,06,50,000 |
| NBHM | Mathematics | 37,47,941 |
| | Marine Biology | 80,00,000 |
| UGC Infrastructure | Mathematics | 20,00,000 |
| SIBER | Marine Biology | 2,05,00,000 |
| DST-PURSE | University | 1,50,00,000 |
| UGC Research Fellowship | Marine Biology | 37,80,000 |

Significant outcomes from these departments are

- The laboratories in these departments are well equipped with modernized advanced equipment for research and consultancy.
- The grants have been utilized for strengthening the computing and networking facilities.
- The funding has enabled Ph.D. Scholars to use state-of-the-art facilities for their research.
- The workshops/conferences/seminars organized and the special lectures delivered by eminent scientists under these schemes have facilitated research collaborations with reputed research institutions in India and abroad.
- The quality of publications from the funded departments has significantly enhanced as evidenced by the impact factor and citation index, leading to greater visibility both at national and international levels.

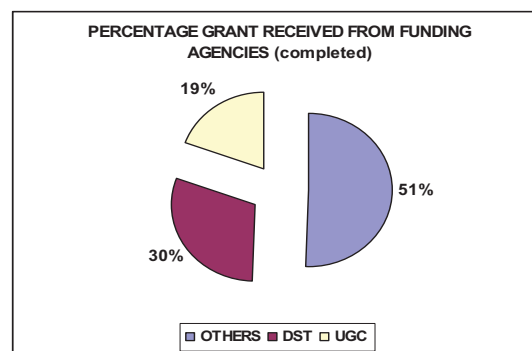
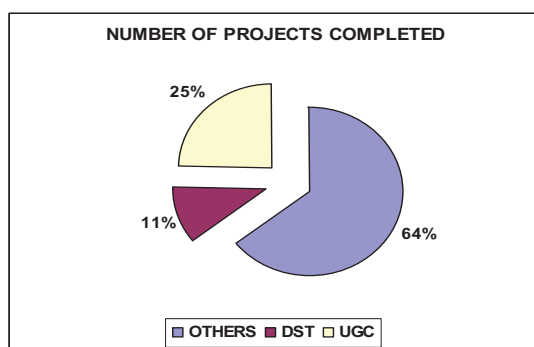
3.2.6 List details of

a. research projects completed and grants received during the last four years (funded by National/International agencies).

A total of 444 projects were completed during the review period with a total outlay of Rs. **89.5 crores**. The details of the completed projects during the last five years are provided in the department profiles.

Total number of research projects completed during the last four years (Funded by National/International agencies)

| # | Funding Agencies | Projects | Amount (Rs.) | Percentage |
|---|------------------|------------|------------------|--------------|
| 1 | UGC | 110 | 173551110 | 19.39 |
| 2 | DST | 49 | 269104043 | 30.06 |
| 3 | Others | 285 | 316629585 | 50.55 |
| | Total | 444 | 895241011 | 100 |



| S.No. | Funding Agency | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|--------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|------------------|------------------|------------------|
| 1. | UGC-SAP | 3075000 | 5000000 | 54925000 | 11550000 | 5900000 | 19700000 |
| 2. | UGC-Non-SAP | 16000000 | 9000000 | 16000000 | 13000000 | 2000000 | 4000000 |
| 3. | UGC Special Schemes | 800000 | 580000 | - | - | 38500000 | - |
| 4. | UGC Projects | 12026310 | 12732600 | 22782600 | 23659000 | 10204100 | 38587964 |
| 5. | DST-FIST/PURSE | 25350000 | - | 33575000 | 150000000 | 51800000 | - |
| 6. | DST Projects | 10012928 | 12474690 | 21079645 | 7707304 | 30777243 | 54332000 |
| 7. | Others | 133772096 | 135087769 | 70459501 | 85201517 | 95469705 | 149671252 |
| | Subtotal | 201036334 | 174875059 | 218821746 | 279417821 | 234651048 | 266291216 |
| Grand Total | | 2007-12: <u>1108802008</u> | 2008-13: <u>1174056890</u> | 2009-14: <u>1200129734</u> | | | |

3.3 Infrastructure for Research

3.3.1 What efforts have been made by the university to improve its infrastructure requirements to facilitate research? What strategies have been evolved to meet the needs of researchers in emerging disciplines?

- Several improvements in infrastructure have been made to facilitate research including sterile rooms free from dust, environmental pollutants, aerosols, chemical vapours and microbes, uninterrupted power supply, internet facility, common instrumentation facility, and field units for field research are available in the university.
- A Central Instrumentation Services Laboratory (CISL) is available for use by all staff, scholars and students in the university. Sophisticated equipment have been purchased and several existing equipment upgraded. The major equipment available in the university are Atomic Absorption Spectrophotometer, Atomic Force Microscope, CHNS & O analyzer, ELISA Reader, Fermenter, Fluorescent Microscope, FT-IR, NMR, Gel documentation system, High speed refrigerated centrifuges, HPLC, HPTLC, ICP, Lyophilizer, MALDI-TOF, GCMS, Mercury analyzer, Microarray scanner, Microbial Identification system, Real-time-PCR, Scanning Electron Microscope with Energy Dispersive Spectroscopy, Scintillation Counter, Seawater circulation system, Simultaneous TG-DTA/DSC, Spectrofluorimeter
- Researchers in Nanotechnology, Oncology, Genomics, Proteomics, and Bioinformatics and other emerging disciplines are encouraged to utilize the facilities and expertise available in CISL as well as in the Faculties of Science, Marine Sciences, Agriculture, and Engineering and Technology.

3.3.2 Does the university have an Information Resource Centre to cater to the needs of researchers? If yes, provide details of the facility.

- Yes. This facility is available from the Central Library. The University has an exclusive centralized Library with INFLIBNET facility, Librarian, Computer Analysts and specialized software packages for data analysis.
- The University organizes workshops and training programmes to impart hands on skills in the application of statistical tools for scientific data analysis like SPSS software, application of search tools like Scopus, and has subscribed to search engines for literatures *viz.*, CABI, Agricola, etc.

3.3.3 Does the university have a University Science Instrumentation Centre (USIC)? If yes, have the facilities been made available to research scholars? What is the funding allotted to USIC?

Yes, the university has a Central Instrumentation Services Laboratory (CISL) facility. This facility is made available to all the research scholars of the university. Separate budget is provided from the general fund to maintain and develop the central instrumentation lab.

3.3.4 Does the university provide residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international)?

Yes, a separate hostel for research scholars is available within the university campus apart from the guest house. The guest house is made available for internationally and nationally sponsored research scholars and to cater to the other research forums organized in the departments. The internet with Wi-Fi facility is available in the central library/hostels. In the guest house internet facility is provided through LAN.

3.3.5 Does the university have a specialized research centre/ workstation on-campus and off-campus to address the special challenges of research programmes?

The University has specialized research centers to conduct research pertaining to marine species, geology, Drosophila lab, nanotechnology research among several others.

3.3.6 Does the university have centers of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

- The University has several research centers that focus on specific areas of research including Center for Micronutrient Research, Center for Environmental Engineering, and Centers for Advanced Studies in Marine Biology and Linguistics.
- Annamalai University is the Coordinating Institute for the flagship collaborative DBT-funded FUNCFOOD research project with the European Union under the 7th Framework Programme. The EU partners comprise scientists from the Karolinska Institute, Stockholm University, Sweden, VINCA Institute, Serbia, University of Tuscia, Italy, and the Biochemical Institute for Environmental Carcinogens, Germany.
- The Center for Micronutrient Research is funded by Johns Hopkins University, USA and the Melinda Bill Gates Foundation.
- The Manufacturing Engineering department has established facilities for nanotechnology research with grants from UGC.

- In addition to the research centers, different faculties in the University have acquired national and international reputation as evidenced by publications, H-index, award of prestigious projects like National Agricultural Innovation Project and PURSE scheme. These centers help scientists and students from other labs/institutes in the following ways:
 - Sharing updated knowledge through various programmes conducted
 - Creating a platform for collaborative research.
 - Formulating research problems in consortium/network mode.
 - Conducting Assessment studies over wide geographical range involving partners.
 - Providing access to laboratory facilities and analyzing samples
 - Validating the research findings by virtue of replicating and confirmatory tests.
 - Exchanging Faculty/Students for research
 - Publishing research output jointly

3.4 Research Publications and Awards

3.4.1 Does the university publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database.

Yes. The Publications Division of the University has brought out more than 600 books, journals, and seminar papers which cater to the requirements of scholars in different disciplines.

The Editorial Board for the journals published by the University comprises eminent scientists and scholars of repute who meticulously review the manuscripts submitted for factual details and presentational aspects.

The following journals are published by the Annamalai University:

1. Annamalai Business Review - ISSN 0974-1690
2. Annamalai Economic Papers
3. Annamalai International Journal of Business Studies and Research (AIJBSR) - (ISSN: 0975-749X): The Annamalai International Journal of Business Studies and Research (AIJBSR) published annually by the Dept. of Business Administration. The articles published in AIJBSR are indexed in the EBSCO database.
4. Annamalai Journal of Educational Endeavours. (ISSN No.: 1829 2278-9804).
5. Annamalai Journal of Management -ISSN- 0974-0406
6. Annamalai University – Indian Languages Journal.
7. Annamalai University Agriculture Journal (AUAJ) (ISSN No.2320-1746).
8. Annamalai University Educational & Psychological Journal.

9. Annamalai University- Engineering and Technology Journal.
10. Annamalai University- Humanities Journal (ISSN No. 0517-872X).
11. Annamalai University- Sciences Journal.
12. Journal of Integration Studies ISSN 0974-8792
13. Voice International by the English Department ISSN- 2229 – 3248

3.4.2 Give details of publications by the faculty:

The faculty and students of the University have been prolific with respect to publications. SIR World Reports 2012 as indexed in Elsevier's Scopus, the most comprehensive database of 3,290 World Research Institutions has ranked Annamalai University in the 297th position in the region, and 22nd position in India (including all institutes) and 7th position among Indian universities based on its score on various parameters of publication. In a recent ranking of India's Best Research Universities by Careers 360, Annamalai University ranks 21st in India (including research institutes), and 3rd in the state of Tamil Nadu.

The pivotal position of this university in the international ranking is made possible because of consistent efforts taken by the faculty to publish quality articles. During the last five years, the faculty and students of the University have published 8989 research papers, reports, books and monographs. Of these, 642 are books including textbooks, chapters in edited research volumes, reports and monographs. Many of the textbooks authored by the faculty are prescribed in the syllabus of several colleges and universities across the country. It is noteworthy to mention that faculty members have also contributed to school textbooks both for the State and the Centre Boards. More than 1288 research papers have been published in peer-reviewed international journals in the period 2007-2012. There have been more than 25 articles published in journals with impact factors greater than 3.0, including journals such as *BMJ* (13.5), *Antioxidant Redox Sig* (7.58), *Pineal Res.*(6.5) *Free Radic Biol Med* (5.7), *PLoS One* (4.4), *Am J Physiol Heart Circ Physiol.*(3.97). The h-index of the University is 32.

The publications of the faculty and students are summarized in the Table below. The details are provided in the NAAC volumes dedicated to individual departments.

3.4.3 Give details of Faculty serving on the editorial boards of national and international journals, Faculty serving as members of steering committees of international conferences recognized by reputed organizations/ societies

Several faculty members (75) serve on the editorial board of journals as editors and referees. In addition 16 faculty are members of the steering committees of international organizations and societies.

| Papers published in National journals | Papers published in International journals | Monographs | Book Chapters | Books With ISBN |
|---------------------------------------|--|------------|---------------|-----------------|
| 7059 | 1288 | 49 | 381 | 212 |

3.4.4 Provide details of

- * **research awards received by the faculty and students**
- * **national and international recognition received by the faculty from reputed professional bodies and agencies**

The following tables list the research awards and recognition received by the faculty and students. Details are given in the departmental evaluative reports.

| S.No. | Award |
|--------------------|---|
| For Faculty | |
| 1. | Ayyan Thiruvalluvar Award |
| 2. | Best Extension Award |
| 3. | Best faculty award 2011 in Management |
| 4. | Best Poster Presentation |
| 5. | Best Professor Award |
| 6. | Best Research Paper Award |
| 7. | Best Researcher –Annamalai University |
| 8. | Best Teacher |
| 9. | Best Thesis Award |
| 10. | Bharat Excellence Award |
| 11. | Bharat Jyoti Award |
| 12. | BOYSCAST fellowship |
| 13. | Bursary Award ICPP |
| 14. | Career Award for Young Teachers |
| 15. | DAAD Fellowship from Germany |
| 16. | DBT CREST Award |
| 17. | DBT National Young Woman Bioscientist |
| 18. | DBT Overseas Research Associateship Award |
| 19. | Distinguished teacher award |
| 20. | Dr. Ambedkar National fellowship award |
| 21. | Dr.K.R.Narayanan - Award |
| 22. | Endeavour Research fellowship |
| 23. | Environmentalist for the year |
| 24. | Fulbright Scholar |
| 25. | INSA Award |
| 26. | IPI Award |
| 27. | Lifetime Achievement Award |
| 28. | M.H. Shukla National Award |
| 29. | Nag Memorial Award |
| 30. | Naga award |

| | |
|-----|--|
| 31. | NESA-Scientist of the year 2010 |
| 32. | Odum Gold Medal Award |
| 33. | Pandit Ayothidasar Award |
| 34. | Prestigious Thomson Reuters Research Excellence -INDIA |
| 35. | Professor Placid Rodriguez Memorial Award |
| 36. | Rashtriya Gaurav award |
| 37. | SCOR (Scientific Committee on Oceanic Research) Award |
| 38. | Senthamil Thilagam Award for Best research paper |
| 39. | Shiksharattan Puraskar |
| 40. | Srilochani Varadarajulu Endowment |
| 41. | Tamil Sudar Award for the Best Research Paper |
| 42. | Viswarkarma award |
| 43. | Young Scientist Award |
| 44. | Young Scientist Fellowship |
| | For Students |
| 45. | Rajiv Gandhi Junior Research Fellowship award |
| 46. | Best Books Award |
| 47. | Best Poster Presentation |
| 48. | Best Oral Presentation Award |

Recognition

| S. No | Recognition |
|-------|--|
| 1 | Chairpersons of different boards |
| 2 | Life/ annual Member of different affiliated society/associations |
| 3 | Board of studies member |
| 4 | Board of selection member |
| 5 | Member of various Doctoral committees |
| 6 | Member of the Research Board of advisors |
| 7 | Member of AICTE inspection committee |
| 8 | Reviewers for national and International Journals |
| 9 | Expert committee members |
| 10 | Member in Editorial Board for Journals |

3.4.5 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years. Does the university participate in *Shodhganga* by depositing the Ph.D. theses with INFLIBNET for electronic dissemination through open access?

The average number of successful M.Phil. scholars guided per faculty is 3, and for Ph.D. is 2 as shown in the Table. Steps have been taken to deposit the Ph.D. theses with INFLIBNET for open access.

| S.No. | Faculty | Average No. of Successful Scholars Guided per Faculty during last 4 years | |
|-------|--------------------------|---|-------|
| | | M.Phil. | Ph.D. |
| 1. | Arts | 4 | 1.75 |
| 2. | Science | 3.875 | 2.37 |
| 3. | Marine Sciences | 3.25 | 2.35 |
| 4. | Indian Languages | 1.14 | 1.44 |
| 5. | Engineering & Technology | 2.20 | 2.08 |
| 6. | Education | 3.86 | 1.13 |
| 7. | Fine Arts | 2.0 | 3.0 |
| 8. | Agriculture | 4 | 2.4 |
| 9. | Medicine | - | 1.6 |

3.4.6 What is the official policy of the university to check malpractices and plagiarism in research? Mention the number of plagiarism cases reported and action taken.

- Annamalai University is committed to undertaking research with impeccable scientific integrity and in conformity with the accepted code of principles on Good Research Practices (GRP).
- It is mandatory for all Ph.D. students to undergo training in Research Methodology in order to adopt GRP. Students registering for a research degree shall compulsorily attend these courses immediately after joining in order to inculcate best practices early in their research career.
- The mandate of publishing two research papers before submitting the Ph.D. thesis and evaluation of the thesis by external experts, one from India and another overseas enables detection of malpractices and plagiarism. In addition the University will use software to detect plagiarism.
- The University policy on plagiarism requires that if an error is detected after publication, the corresponding author shall request the journal to publish an erratum as soon as possible. If there are concerns and serious doubts about the authenticity of the data, the authors shall retract the paper from the journal.

- A committee duly constituted by the University will investigate complaints of alleged research misconduct by the research scholar and/or Supervisor. The following sanctions will be imposed on any research scholar/Research Supervisor who is found to have committed research misconduct

- [1] In the case of scholars who have committed an act of plagiarism, his/her thesis/degree shall be forfeited, and his/her research registration shall be cancelled, and he/she shall be debarred to register for any other programme in the university.
- [2] Retraction or correction of pending or published papers emanating from the thesis in question.
- [3] For the abetment of above such action, the recognition of his/her supervisor shall be withdrawn for a period of five years and he/she shall be debarred from guiding research scholars for any programme in this university, till such period.

However, till date no case of plagiarism has been officially reported.

3.4.7 Does the university promote interdisciplinary research? If yes, how many interdepartmental / interdisciplinary research projects have been undertaken and mention the number of departments involved in such endeavours?

Yes. The details are given in item No. 3.1.4.

3.4.8 Has the university instituted any research awards? If yes, list the awards.

Best Researcher Awards have been instituted by the University through various endowments. These are awarded under the aegis of Teacher's Day Celebrations organised every year by the University. The number of teachers recognized for their contributions to research is furnished below:

| S.No. | Particulars | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------|--|------|------|------|------|------|------|
| 1. | Best Researcher Award | 3 | 9 | 10 | 9 | 9 | 7 |
| 2. | Best Researcher Award (through Endowments) | - | 3 | 7 | 3 | 3 | 6 |

3.4.9 What are the incentives given to the faculty for receiving state, national and international recognition for research contributions?

- Cash Award is given for individual Faculty on completion of 5 Ph.D. awards.
- Cash Award is given to the faculty for the publication of research papers in refereed international journals in the Faculty of Agriculture, through Sreelochini Varadarajulu Endowment.
- Meritorious performances are given due weightage at the time of Career Advancement and are also considered for nomination to awards, specially appointed committees, organizing research events etc.

3.5 Consultancy

3.5.1 What is the official policy of the university for structured consultancy? List a few important consultancies undertaken by the university during the last four years.

Official Policy for Consultancy

Annamalai University encourages faculty to undertake consultancy with industries and other extramural agencies to promote intellectual exchange, spawn innovations and inventions, and extend their services to socially useful enterprise. Each request for consultancy will be examined based on the long-term benefit to the University. However, while undertaking consultancy, faculty members shall ensure that there is no adverse effect on the reputation and integrity of the University and the commitment to academic duties is not compromised. The total annual income of the teacher from consultancy shall not exceed 50% of the total emoluments in a year. The overhead charges for the consultancy will vary from 25 to 35% of the total outlay depending on the funding agencies, mode of consultation, and utilization of University resources.

During the last four years a sum of Rs. 35406433 has been generated from various consultancy services. The important consultancies undertaken by the university during the last four years are tabulated hereunder.

| Sl.No | Name of Project | Funding Agency | Consultancy Fee |
|-------|--|---|-----------------|
| 1. | Business Consultancy Services | Casino Bakery Foods-SSI | 50,000/- |
| 2. | Ministry of Co-operatives | | 1,50,000/- |
| 3. | Risk Analysis & Risk Management Plan Veerapandi CETP, Tiruppur | Veerapandi CETP, Tiruppur | 15,00,000/- |
| 4. | GPS. Maps Info Consultancy for Veerapondi CETP, Tiruppur | Veerapondi CETP, Tiruppur | 5,50,000/- |
| 5. | ETP - Augmentation Consultancy as Project management Consultants for M/s. Ponlait, Puducherry. | M/s. Ponlait, Puducherry. | 2,50,000/- |
| 6. | EIA/EMP for SIPCOT Industrial Park, Thervoykandigai, Chennai | SIPCOT Government of Tamil Nadu Chennai | 12,00,000/- |
| 7. | AAQM for Three Project FLC Project locations | WAPCOS, New Delhi | 6,00,000/- |
| 8. | EIA / EMP for M/s. Marg. Port, Mugayur | Marg Swarnaboomi. Chennai | 20,00,000/- |

| Sl.No | Name of Project | Funding Agency | Consultancy Fee |
|--------------|--|--|------------------------------|
| 9. | Additional Environmental Studies for EIA towards Fishing Harbor at Poombuhar | Department of Fisheries, Govt. of Tamilnadu | 2,00,000/= |
| 10. | INTER SECTORAL EIA for ICZMA for Tamilnadu Coast | DHI India, Directorate of Environment, Govt. of Tamil Nadu | 29,00,000/= |
| 11. | Augmentation Methodology for the Existing Common Effluent Treatment Plant & Technical Arbitration for Angeripalayam CETP, Tiruppur | Angeripalayam CETP, Tiruppur | 10,00,000/= |
| 12. | Vallam-Vaipar Industrial Park, Sriperumpudur Taluk, Kanjeeपुरam District | SIPCOT, Govt of Tamil Nadu | 6,00,000/= |
| 13. | Vaipur-Mathur Industrial Park, Sriperumpudur Taluk, Kanjeeपुरam District | SIPCOT, Govt of Tamil Nadu | 6,00,000/= |
| 14 | FAO - Impact of Climate change on Invasive Traits of Weeds. | Food and Agricultural Organisation, UN. | 2000 US \$ (Rs. 1,10,000) |
| 15. | Improved rice crop management for rising productivity in the submergence prone and salt affected rainfed low land in South Asia | STRASA Phase - II IFAD-IRRI. | 7750 US \$ 3,75,000 |
| Total | | | 1,20,85,000 |

3.5.2 Does the university have a university-industry cell? If yes, what is its scope and range of activities?

A separate Industry Institution Partnership Cell (IIPC) functions with the following objectives:

- Depute teaching and technical staff for training in industry.
- Organize special lectures for students and staff.
- Organize industry visit.
- Entrepreneurship skill development.
- Soft skill training for the students by experts from industries.

3.5.3 What is the mode of publicizing the expertise of the university for consultancy services? Which are the departments from whom consultancy has been sought?

- The Industry Institute Interaction cell in the Faculty of Engineering and Technology fosters academy-industry interaction.
- The academic standing of the faculty attracts clients to seek consultancy.
- The University website showcases the expertise of the faculty members
- The following departments are on demand for consultancy services from reputed agencies: Agronomy, Biochemistry & Biotechnology, Botany, Business Administration, Chemistry, Civil Engineering, Civil and Structural Engineering, Earth Sciences, Economics, Horticulture.

3.5.4 How does the university utilize the expertise of its faculty with regard to consultancy services?

Apart from the monetary benefits, the faculty members function as liaison between academy and industry. This serves to provide industrial training to students, campus placements, and long-term research collaboration.

Utilization of expertise

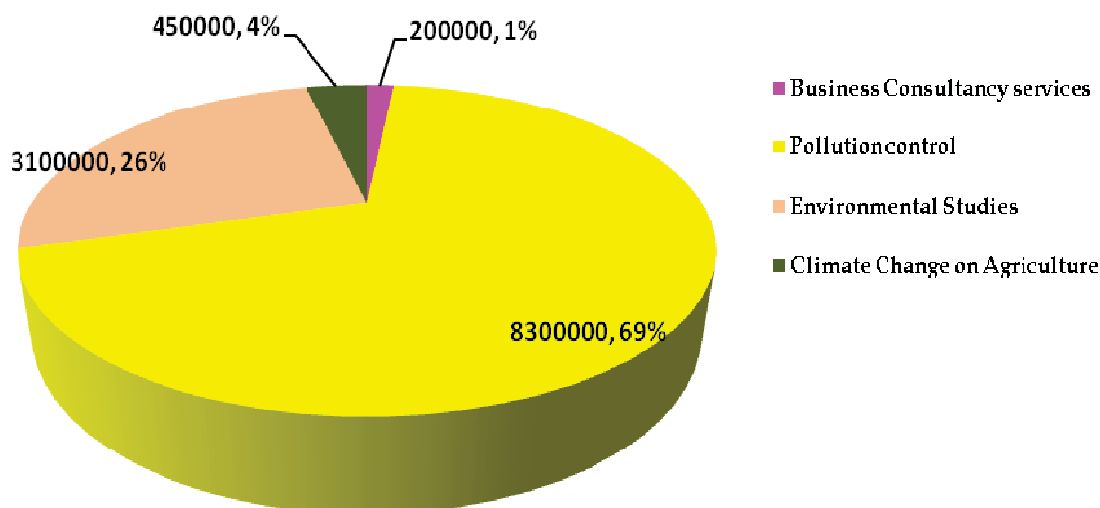
1. The expertise of the faculty in Indian Languages in various Institutes like CIIL, Mysore, Virtual University, Chennai, NTS, Mysore, Madras University, Chennai.
2. Development of the common effluent treatment plants for various industries in Tamil Nadu by the Department of Civil Engineering.
3. Food and Agricultural Organization of United Nations - Consultancy for Weed Risk Assessment (2009), Rice Allelopathy (2008), Weedy Rice Management (2010).
4. Churches Auxiliary for Social Action for agronomic rehabilitation of tsunami affected villages.
5. Farmer's consultancy service is done regularly. Farmers facing agricultural problems consult the experts concerned to get remedies in person and by mail. It is a usual practice for the farmers' clubs, NGOs and other rural development organizations to get counseling from the faculty.
6. Water samples from bore wells, tanks, wells, etc., brought by the farmers of nearby villages are analyzed for various quality parameters such as EC and pH.
7. The training programmes conducted in the neighborhood villages has motivated the farmers to adopt latest farming technologies such as Integrated Farming system, Integrated nutrient and weed management.
8. The Department of Agronomy has been actively involved as nodal centre by the State Government in raising mass awareness on invasive alien weeds like *Parthenium hysterophous* and *Prosopis juliflora*.
9. The Department of Agricultural Economics organizes Training programmes to SHG's members to impart knowledge in Food Processing.

3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

During the last four years a sum of Rs. 35406433/- has been generated from various consultancy services. The broad areas of consultancy services provided by the staff members are in Environmental Studies (26%), Business Consultancy services (1%), Pollution control (69%) and Climate Change on Agriculture (4%).

The Centre for Environment Health and Safety, a multi-disciplinary consultant team in the department of Civil Engineering provides counselling for the following: distilleries, cement plants, Industrial Estates/Parks/SEZ, Common Effluent Treatment Plants, TSDF, Hydro Electric Power & Irrigation Projects, and Port, Harbor, Jetty and Coastal Projects

**Broad areas of consultancy services based on the consultancy charges
(Value in Rs.)**



3.6 Institutional Social Responsibility (ISR) and Extension Activities

3.6.1 How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

The University is located in a backward area and plays a major role in the social upliftment of this area.

Participation in NSS, NCC, RRC or YRC is made mandatory for students as a course with credit grade points for undergraduate students.

The following social outreach programmes are organized by different departments/faculties:

Center for Rural Development

The following programmes /Initiatives have been organized by the Centre for Rural Development, to sensitize its faculty and students on its Institutional Social Responsibilities:

1. Service villages and their Farmers Clubs

From 2007 onwards the Centre for Rural Development has extended its Extension Services to the neighbouring villages of Annamalai University through establishing and nurturing the Farmers Clubs under Farmers Club Programmes funded by NABARD, Chennai. Since 2007, more than 50 Training and Awareness Programmes have been conducted for the benefit of the members of Farmers Clubs with the support from NABARD and Annamalai University.

2. Exposure Programmes and Institutional visit

Programmes were organised for the benefit of the students as well as Rural Society through personal visit and inquiry with the Institution running in the villages such as Self Help Groups, Youth Clubs, NGOs and Governmental Organizations.

3. Conduct of Skill Orientation Programmes

The Centre for Rural Development has organized more than 40 programmes related to Skill Development of Rural Youth, Rural Women and Farmers with the support from NABARD, District Rural Development Agency, Directorate of Town Panchayats and Magalir Thittam.

4. Serving the Rural Poor by Transferring the Technology programme Lab to Land

In order to promote the livelihood status of rural poor, nearly 25 programmes have been conducted through the efforts of the Centre for Rural Development with the support from the University Extension Grant and NABARD. All the programmes have created a significant impact in improving the livelihood of the rural poor.

Faculty of Agriculture

- The Rural Agricultural Work Experience (RAWE) for B.Sc. Agri students mandates a 6-months stay with farmers in villages to learn prospects and problems in farming. Faculty members visit these villages and provide technical advice to students and the farming community.
- Organization of various training programmes for farmers and Self Help Groups (SHG) members on agrarian issues.
- Mass awareness campaigns on social causes like Parthenium Eradication involving State Government, District Collectors, Members of Legislative Assembly, executives of State Agriculture Department.
- Farmers' Day is organized annually. Result Demonstration, Farm and Home visits and discussions/meetings are organized in four disadvantaged districts of Tamil Nadu in about 40 selected villages.

- Extension of climate resilient farming system models to 36 villages in 12 clusters spread through 4 districts covering 2400 farming households in linkage with Dhan Foundation has been implemented by Faculty of Agriculture through World Bank and ICAR sponsored project. This project was adjudged as the best among 36 such projects implemented across the country by various SAUs/ICAR institutions.

Department of Business Administration

Programmes are organized to motivate budding entrepreneurs.

NSS, NCC, RRC, YRC

- There are 40 NSS units comprising 100 student volunteers per unit, 3 NCC battalions with 500 cadets and 10 RRC units with 2000 volunteers. These units participate in various extension activities like special camps, environmental awareness, youth leadership camp, blood donation, tree sapling planting, coastal cleaning activity, road safety awareness, drug abuse, disaster risk reduction, anti-dowry pledge, adult education, anti tobacco rally and AIDS awareness campaign.
- Social Service League of the University functions with a view to inculcate the spirit of social and civic consciousness and to promote good value system among the students, to render their service to the society.
- Organisation of World Population Day, International Women's Day, etc. to create awareness on social causes.
- Indian Association of Parliamentarians for Population and Development (IAPPD) sponsored programmes are conducted every year to sensitize the faculty and students.

The social outreach programmes which have created an impact on students' campus experience are Mass Literacy campaigns, Coastal cleaning campaign, Blood donation camps, HIV awareness camps, Medical camps, Yoga training camps, Youth leadership camps, village adoption schemes, skill development training to youth, and veterinary camps in villages.

3.6.2 How does the university promote university-neighborhood network and student engagement, contributing to the holistic development of students and sustained community development?

The following programmes serve to promote university-neighborhood and student engagement in sustained community development:

- Social outreach programmes organized by NSS, YRC and RRC
- Student volunteers for regulating traffic

- Students' involvement during local festivals.
- Students from Physical Education department help the local schools and colleges to organize sports events and train them for competitions.
- Students in Agriculture Faculty take up research work in farmers' fields for validation.
- 6-months village stay as part of the RAWA programme during final year of B.Sc. Agriculture.
- Consultancy offered to farmers on agrarian issues.
- Medical and Dental camps

3.6.3 How does the university promote the participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programmes?

- Permitting staff to impart training in programmes organized by the NGOs and other organizations like CREED, MSSRF, Department of Rural Development, State Agricultural Departments
- To motivate students' involvement on activities that promote citizenship roles, recognition awards are given for glorious activities such as participation of cadets in Republic Day Parades in the capital, representation of University or State in sports and games etc. The endowment awards are also given to the male and female Best NSS Volunteers to encourage them.

3.6.4 Give details of social surveys, research or extension work, if any, undertaken by the university to ensure social justice and empower the underprivileged and the most vulnerable sections of society?

- The Centre for Rural Development conducted social survey in its service villages to identify the status of the underprivileged and the most vulnerable sections of society. The Centre has also conducted Research and Extension activities in order to promote the livelihood status.
- A number of extension works for the benefit of under-privileged women have been carried out in the disadvantaged districts of Tamil Nadu.
- The university has also taken up baseline survey of the livelihoods of resource poor farmers in the four disadvantaged districts of Tamil Nadu.
- The Faculty of Agriculture has trained 100 SC/ST farmers in rice+fish+poultry farming system, domestic food making for livelihood, and microbial biofertilizers through DBT funded research projects.

- The Faculty of Arts organised a programme for Creation of Civic Awareness. Civic education was imparted to rural men and women using material developed by Tamil Nadu State Resource Centre.
- CAS in Linguistics through its Centre for Language and Speech Disorder Studies offers treatment to children with language and speech disorders.
- UGC Scheme of Lifelong Learning has implemented Literacy and Continuing Education Programmes

3.6.5 Does the university have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

Yes, the students who are involved in these activities are monitored by the concerned teachers in charge of that activity.

3.6.6 Bearing in mind the objectives and expected outcomes of the extension activities organized by the university, how did they complement students' academic learning experience? Specify the values inculcated and skills learnt.

These activities help the student to improve their

- Practical training and hands on experience
- Communication skills
- Adaptability to socio-environmental conditions
- Organizational skills
- Community involvement
- Crises management ability
- Civic sense
- Commitment to nation building
- Leadership quality.

3.6.7 How does the university ensure the involvement of the community in its outreach activities and contribute to community development? Give details of the initiatives of the university which have encouraged community participation in its activities.

Centre for Rural Development

The CRD has enrolled 59 Farmers Clubs in surrounding villages in the districts for outreach activities.

Faculty of Education

The Physical Education department conducts health awareness camps, Summer Sports Coaching Camps for school children [Tennis, Cricket and Badminton] and provides infrastructure facilities [Indoor Tennis Complex, Pavilion, Children's park] for the general public including children and senior citizens.

Faculty of Agriculture

- The training programmes conducted in the neighborhood villages has motivated 4,000 farmers to adopt latest farming technologies such as Integrated Farming system, integrated nutrient and weed management.
- The Agronomy department has been implementing the prestigious National Agricultural Innovation Project for sustainable rural livelihood security in disadvantaged districts of Tamil Nadu with an outlay of Rs. 9.65 crores, sponsored by World Bank and ICAR. This project addresses 2400 farming households spread over 12 clusters, each comprising three villages. The target area covers all the four disadvantaged districts of Tamil Nadu viz. Cuddalore, Nagapattinam, Villupuram and Thiruvannamalai.
- The area planted with elite rice and sugarcane has increased by 30 per cent.
- Frequent visits of students and faculty to the villages have also motivated the farmers to adopt ecofriendly practices.
- The Faculty has trained farmers on preventing and managing invasion by alien weeds in nine districts of Tamil Nadu.
- Collaboration with IRRI and farmers of Cauvery delta in evolving submergence tolerant rice.
- Mass awareness on invasive alien weeds like *Parthenium hysterophous* and *Prosopis juliflora*.
- The post harvest research work and training programmes has helped the farmer community to adopt value addition process in the horticultural crops.
- The expertise in Horticulture regarding the Thane disaster assessment and management during Dec-2011 assisted recovery of 30% of Thane victims.

Faculties of Medicine and Dentistry

- Anti-tobacco public awareness program
- Importance of oral health and maintenance.

3.6.8. Give details of awards received by the institution for extension activities and/contributions to social/community development during the last four years.

1. Best Red Cross Movement Award (2011-2012) by Indian Red Cross Society.
2. Best research project award by NAIP – ICAR, New Delhi for enhancing the livelihood of 2400 farmers in four disadvantaged districts of Tamil Nadu in the year 2011.
3. Meritorious Contribution to National Invasive Weed Surveillance during 2011 from ICAR, Government of India
4. NSS coordinators received award for the best NSS officers in the year 2011-2012 both at the state and the national level.
5. The Annamalai University NSS has received Indira Gandhi Award for Best NSS (2011-2012) by Ministry of Youth Affairs and Sports from the President of India.

3.7 Collaboration

3.7.1 How has the university's collaboration with other agencies impacted the visibility, identity and diversity of activities on campus? To what extent has the university benefitted academically and financially because of collaborations?

The university and its departments have active collaboration with other universities/industry/research institutes of national and international repute. These collaborations help the university academically in the following ways:

- updating knowledge and integrate applied knowledge for teaching
- resource sharing
- technology transfer
- investigate research problems of global importance
- enabled faculty in the University to work in a consortium on inter-disciplinary concepts
- stimulated innovation
- increased visibility among peers due to joint publications
- encouraged faculty and student exchange
- enhanced the quality of research

Financially, multi-institutional projects have attracted funds from diverse national and international agencies as well as industry sponsored projects. The DBT sponsored Indo-EU FUNCFOOD project, the projects undertaken by the Center for Micronutrient Research, Marine Sciences and agri-based projects are multi-crore ventures that will yield large databases. Being a player in a large consortia confers recognition to the university in the global scientific scenario. The list of universities/institutes collaborating with Annamalai University is given in Section 3.1.4. These collaborations have fetched both academic, and monetary benefits to the university.

| S.No | Department/ Faculty | Collaborating University/Institute | Outcome | Project Outlay (Rs.) |
|------|---------------------------------------|--|--|--|
| 1. | Agronomy | <ul style="list-style-type: none"> International Institute of Biotechnology and Toxicology, and National Institute of Technology Network of 16 National ICAR institutes, State Agricultural Universities and IRRI, Philippines International Rice Research Institute (IRRI), Philippines (STRASA & IFAD) Food and Agriculture Organisation (FAO), Rome | <p>Patent on cellulose nanofiber</p> <p>Evolving rice varieties tolerant to submergence and salt</p> <p>New submergence tolerant rice variety CR-1009 sub-1 Sigappi</p> <p>Weed risk</p> | <p>30,00,000</p> <p>60,00,000</p> <p>20,00,000</p> <p>1,10,000</p> |
| 2. | Horticulture | <ul style="list-style-type: none"> Network of MS University, IIHR, St, Joseph College, UAS Bangalore, MSSRF Vyanad, Kottakal Arya Vaidya Sala and TBGRI-Trivandrum | Conservation of RET plants of India | 14,00,000 |
| 3. | Soil Science & Agricultural Chemistry | <ul style="list-style-type: none"> International Potash Institute, Switzerland | Recommendation of potash requirement for turmeric in Tamil Nadu | 2,60,000 |
| 4. | Botany | <ul style="list-style-type: none"> Tajen University, Taiwan Crop Physiology, University of Agricultural Sciences, Bangalore | <p>Bioactive compounds from medicinal plants</p> <p>Molecular biology of mangroves of Pitchavaram</p> | Academic benefit |
| 5. | Chemistry | <ul style="list-style-type: none"> CavinKare Pvt Ltd IASST, Guwahati, PSG College for Pharmacy | <p>4 Patents filed</p> <p>Drug development</p> | 45,00,000 |
| 6. | Marine Sciences | <ul style="list-style-type: none"> MoU with United Nations University (UNU), Institute for Water, environment and health (INWEH), Canada Faculty of Natural Sciences, Leibniz University, Hannover, Germany Penza State Pedagogical University, Penza, Russia Vietnam Academy of Science & Technology, Caugiay | <p>Training professionals in 19 countries on coastal biodiversity</p> <p>Barcoding of seagrasses</p> <p>Arctic and Indian estuarine benthic assemblages</p> <p>Phylogenetic relationship & innate immune parameters of edible fish <i>Mugil cephalus</i></p> | <p>US \$ 1,12,000</p> <p>Faculty and student exchange for academic benefit</p> <p>12,07,658</p> <p>Faculty and student exchange for academic benefit</p> |

| | | | | |
|----|------------------------------|---|---|---|
| 7. | Manufacturing Engineering | <ul style="list-style-type: none"> • National Institute for Interdisciplinary Science & Technology (NIIST), Kerala. • Welding Research Institute (WRI), Tiruchirappalli. • Indira Gandhi Center for Atomic Research (IGCAR), Kalpakkam. • Defence Metallurgical Research Laboratory (DMRL), Hyderabad. • Defence Research and Development Organisation, New Delhi. | Material processing | 29,14,000 |
| 8. | Psychology | <ul style="list-style-type: none"> • CREED & NABARD | Premarital counseling to adolescent students | |
| 9. | Biochemistry & Biotechnology | <ul style="list-style-type: none"> • Indo-EU Project with Stockholm University, Karolinska Institute, VINCA Institute, BIU Germany, University of Tuscia • Johns Hopkins University, Melinda Bill Gates Foundation • IIT-Madras, National Institute of Nutrition, Indian Institute of Science, Raj Bioengineering, Gurgaon | Protective efficacy of functional food components in intervention cross-over studies Micronutrients, Rotavirus vaccine observational study Testing anticancer potential of phytochemicals | Both academic and monetary benefit 1,65,68,000 |

3.7.2 Mention specific examples of how these linkages promote

a) Curriculum development

Collaboration with other industries and institutions help in updating the curriculum in tune with the latest trends in the subject. Eminent Scientists from collaborative institutions are included as members of Board of Studies of various departments and play a proactive role in curriculum development process. For example the scientists from CSIR-SERC are involved in the curriculum development as members of Board of Studies in Faculty of Engineering and Technology.

Linkage with FAO, in consultancy for weed risk assessment and invasivity of weeds due to climate change, was responsible for the addition of these aspects in the PG syllabi whereas involvement in advising the government for GMO approval led to the inclusion of ecological risk assessment of GMOs, in the curriculum of M.Sc. (Ag.) Agronomy programme. Similarly collaboration with IRRI and World Bank in NAIP projects resulted in the introduction of the innovative Postgraduate Diploma in farming systems by the department of Agronomy.

b) Internship

The linkage with industries and institutions provides financial assistance to students to undertake research besides imparting technical skills and employment opportunities.

c) On-the-job training

For the mandatory training courses in certain programmes like BE, B.Pharm., M. Pharm., B.Sc. (Ag/Hort.), MBA, M.Sc. Biotechnology, the students are trained in industries/institutions. These courses include Industrial training in MBA, Industrial Tie-up in B.Sc. (Ag.), Coffee and Tea Training in B.Sc. (Hort.), Research in M.Pharm. and Biotechnology.

d) Faculty exchange and development and e) Research

The joint collaborations also provide scope for faculty exchange programmes and consequent technology transfer.

f) Consultancy

During the last four years a sum of Rs.3,54,06,433/- has been generated from various consultancy services rendered to the industries and institutes. The important aspects of consultancy services provided by the faculties are

Faculty of Indian Languages:

The expertise of the faculty is utilized for consultancy services at various Institutes like CIIL, Mysore, Virtual University, Chennai, NTS, Mysore, Madras University, Chennai.

Faculty of Engineering and Technology:

Development of the common effluent treatment plants for various industries in Tamil Nadu by the Department of Civil Engineering.

Faculty of Agriculture:

Faculty in Agronomy are consultants for FAO Rome on Climate Change and Weed Risk Assessment, Invasive features of weeds and Weedy Rice Management and consultant to Churches Auxillary for social action on Agronomic rehabilitation of tsunami affected villages.

Faculty in Horticulture served as consultants for Thane disaster assessment during Dec-2011 and served as member of Steering committee for Hi-tech Agriculture constituted for XII plan proposal by the State Government of Tamil Nadu.

g) Extension

Through various collaborative programmes, the university serves the local predominantly agrarian and resource poor community. The university satisfies the needs of the community via its extension activities in the following ways:

Rural development

Extension programmes have been conducted on the basis of requirements of the target group of service villages of the Centre. Almost all the Extension Programmes conducted by the Centre have extended Welfare and Development measures to the Rural Poor. The specific examples for the extension programmes are as follows

| Sl. No. | Name of the Extension Programme | Year |
|---------|--|------|
| 1. | Soil Testing | 2007 |
| 2. | Rat Control | 2007 |
| 3. | Floriculture | 2007 |
| 4. | Vegetable cultivation | 2007 |
| 5. | Personal Health | 2007 |
| 6. | Mushroom cultivation | 2008 |
| 7. | Goat Rearing | 2008 |
| 8. | Book Binding | 2008 |
| 9. | Rabbit Rearing | 2009 |
| 10. | Milch Animals Breeding | 2009 |
| 11. | Scientific Advancement in Plantain cultivation | 2009 |
| 12. | Seed Generation and Preservation for Paddy and sugarcane crops | 2010 |
| 13. | Dental Camp | 2010 |
| 14. | Veterinary camp | 2010 |
| 15. | Siddha camp | 2010 |
| 16. | Advancement in Seed Generation | 2011 |
| 17. | Nursing & Child Health | 2011 |
| 18. | Plumbing | 2011 |
| 19. | Furniture making | 2011 |
| 20. | Mini catering Service | 2011 |
| 21. | Toys making | 2011 |
| 22. | Community Health and Child rearing | 2012 |
| 23. | Rural Women Empowerment Through Rural Industries | 2012 |
| 24. | Bakery | 2012 |
| 25. | Sustainable Agriculture through Groundnut Cultivation. | 2012 |
| 26. | Tailoring | 2012 |

Agriculture

- Upscaling of climate resilient farming system models with 36 villages in 12 clusters spread through 4 districts, covering 3000 farming households – linkage with Dhan Foundation
- The training and demonstrations imparted by the staff members in projects funded by NMPB have led to many changes in the medicinal plant cultivation.
- Through the networking mode project funded by the NMPB, the RET medicinal plants of utmost importance in terms of biodiversity and medicinal utility are explored and package of practices have been developed.
- Disseminating submergence tolerant paddy varieties for coastal districts.

Medicine and Community Health

- Campaign on Antimicrobial Resistance: Educating School Children on Health, Hygiene and Medicine Use.
- Series of Sensitization Programme on Hospital Acquired Infection for doctors, pharmacists, nurses and sanitary workers of the hospital.
- Development of Evidence Based STG for treating common infectious diseases in out-patient clinics.
- Conducting community based free medical camps, eye camps, hypertension camps in and around Chidambaram.

h) Publication

The following publications reflect the output from the collaboration. These are only representative examples and are by no means exhaustive. The complete list is given in the evaluative reports of the respective departments.

1. Eliningaya J. Kweka, Annadurai Senthilkumar, Venugopalan Venkatesalu. 2012. Toxicity of essential oil from Indian borage on the larvae of African malaria vector mosquito, *Anopheles gambiae*. *Parasite and Vectors*. 5:277.
2. G. Agoramoorthy, M. Chandrasekaran, V. Venkatesalu and M.J. Hsu, 2007. Antibacterial and antifungal activities of fatty acid methyl esters of the blind-your-eye mangrove from India. *Braz. J. Microbiol.*, 38: 739-742.
3. G. Agramoorthy, F. A. Chen, V. Venkatesalu, and P. C. Shea. 2009. Bioconcentration of heavy metals in selected medicinal plants of India. *J Environ Biol*.30: 175-178.
4. Karthikeyan Perumal, Jai Anand Garg, Oliver Blacque, Ramanathan Saiganesh, Senthamarai Kannan Kabilan, Kallupattu Kuppusamy Balasubramanian and Koushik Venkatesan. 2012. β - Iminoenamine-BF₂ complexes: Aggregation-induced emission and pronounced effects of aliphatic rings to radiationless deactivation, *Chem. Asian J.* vol. 7, 2072-2077.
5. Kathiresan, RM. 2007. Integration of elements of farming system for sustainable weed and pest management in the tropics. Crop protection, Elsevier Science, UK. 26. 424-429.

6. Kathiresan, RM. 2011, Impact of climate change on invasive traits of weeds (2011-2012), FAO consultancy report, 2011.
7. M. Shanmugam, K. Narayanan, V. Chidambaranathan, S. Kabilan, Synthesis, spectral characterization and antimicrobial studies of novel s-triazine derivatives. 2013. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, Volume 105, Pages 383–390.
8. M. Somasundaram, S Athavan, K. K Balasubramanian, R. Saiganesh and S. Kabilan, 1. 3-((4-oxo-4H-thiochromen-3-yl)methyl)-4H-thiochromen-4-one, 2013. *Acta Cryst.*2013. E69, o358 doi: 10.1107/S1600536813001906.
9. Manikandan P, Ramalingam SM, Vinothini G, Ramamurthi VP, Singh IP, Anandan R, Gopalakrishnan M, Nagini S. (2012) Investigation of the chemopreventive potential of neem leaf subfractions in the hamster buccal pouch model and phytochemical characterization. *Eur J Med Chem.* 56:271-281.
10. Mosesso P, Bohm L, Pepe G, Fiore M, Carpinelli A, Gäde G, Nagini S, Ottavianelli A, Degrassi F. (2012) Cytogenetic analyses of azadirachtin reveal absence of genotoxicity but marked antiproliferative effects in human lymphocytes and CHO cells in vitro. *Toxicol Lett.* 213: 361-366.
11. S. Chidambaram, M.V Prasanna, U Karmegam, C Singaraja1, S Pethaperumal, R Manivannan, P Anandhan, K Tirumalesh, 2011. Significance of pCO₂ values in determining carbonate chemistry in groundwater of Pondicherry region, India, *Front. Earth Sci.*, DOI 10.1007/s11707-011-0170-5.
12. Sazawal S, Dhingra U, Deb S, Bhan MK, Menon V.P., Black RE. 2007. Effect of zinc added to multi-vitamin supplementation containing low-dose vitamin A and plasma retinol level in children – a double-blind randomized controlled trial. *J. Health Popul Nutr.* 25: 62-66.
13. Sazawal S, Dhingra U, Dhingra P, Hiremath G, Kumar J, Sarkar A, Menon V.P., Black RE. 2007. Effects of fortified milk on morbidity in young children in north India: community based, randomised, double masked placebo controlled trial. *BMJ*; 334(7585):140.
14. Sivaraman Pethaperumal, Sabarathinam Chidambaram, Kandasamy Vijayaragavan, Mohan Viswanathan Prasanna, Kannan Anandavel, Ulaganathan Karmegam, Ramachandran Manivannan, Paluchamy Anandhan, Kesari Tirumalesh, 2010. A Novel Approach for Groundwater Budgeting Using GIS in a Part of Pondicherry Region, India. *J. Water Resource and Protection*, 2, 585-591.
15. V. Venkatesalu, N. Gopalan, C.R. Pillai, Vineeta Singh, M. Chandrasekaran, A. Senthilkumar, N. Chandramouli. 2012. In vitro anti-plasmodial activity of some traditionally used medicinal plants against Plasmodium falciparum. *Parasitol Res.* 111: 497-501.
16. Vidjaya Letchoumy PV, Chandra Mohan KVP, Stegeman JJ, Gelboin HV, Hara Y, Nagini S. (2008) In vitro antioxidative potential of lactoferrin and black tea polyphenols and protective effects in vivo on carcinogen activation, DNA damage, proliferation, invasion, and angiogenesis during experimental oral carcinogenesis. *Oncol Res.*17:193-203
17. Vidya Priyadarsini R, Neeraj Kumar, Imran Khan, Thiyagarajan, P, Kondaiah, P, Nagini S. (2012) Gene expression signature of DMBA-induced hamster buccal carcinomas: Modulation by chlorophyllin and ellagic acid. *PLoS One* 7:e34628.
18. Thirunavukkarasu M, Juhasz B, Zhan L, Menon VP, Tosaki A, Otani H, Maulik N. (2007) VEGFR1 (Flt-1+/-) gene knockout leads to the disruption of VEGF-mediated signaling through the nitric oxide/heme oxygenase pathway in ischemic preconditioned myocardium. *Free. Radic. Biol. Med.* 15: 42: 1487-95.

19. Thirunavukkarasu M, Han Z, Zhan L, Penumathsa SV, Menon VP, Maulik N. [2008] Adeno-sh-beta-catenin abolishes ischemic preconditioning-mediated cardioprotection by downregulation of its target genes VEGF, Bcl-2, and survivin in ischemic rat myocardium. *Antioxid Redox Signal*. 10:1475-84.
20. Penumathsa SV, Koneru S, Zhan L, John S, Menon VP, Prasad K, Maulik N. (2008) Secoisolariciresinol diglucoside induces neovascularization-mediated cardioprotection against ischemia-reperfusion injury in hypercholesterolemic myocardium. *J Mol Cell Cardiol*. 1:170-9.
21. Pari L, Tewas D, Eckel J. Role of curcumin in health and disease. *Arch Physiol Biochem*. 2008 114(2):127-49.
22. P. Subramanian, S. Mirunalini, K. B. Dakshayani, S. R. Pandi-Perumal, I. Trakht, D. P. Cardinali (2007) Prevention by melatonin of hepatocarcinogenesis in rats injected with N-nitrosodiethylamine *J. Pineal Res*. 43: 305-312.

i) Student Placement

Many of the students find placements in those institutions and industries where they completed their internship/project work.

3.7.3 Has the university signed any MoUs with institutions of national/international importance/other universities/ industries/corporate houses etc.? If yes, how have they enhanced the research and development activities of the university?

| S.No. | MoUs with institutions | Research and development activities enhanced in university |
|-------|---|---|
| 1. | School of Biotechnology, Royal Institute of Technology (KTH), Albanova University Centre, Stockholm, Sweden | Biotechnology |
| 2. | Faculty of Natural Sciences, Leibniz University, Hannover, Germany | Natural products & barcoding of Sea grasses |
| 3. | West Coast Hatchery, Cochin, Kerala | Marine ornamental fishes |
| 4. | Penza State Pedagogical University, Penza, Russia | Arctic and Indian estuarine benthic assemblages |
| 5. | Vietnam Academy of Science & Technology, Cau Giay, Hanoi | Phylogenetic relationship & innate immune parameters of edible fish <i>Mugil cephalus</i> |
| 6. | Kumamoto University, Japan | Material processing using Explosives. |
| 7. | Fukii University, Japan | Study on Temple Architecture. |
| 8. | Western University of Health Science, California | Staff and students exchange to strengthen research in Pharmacy. |
| 9. | University of Michigan, Michigan, USA | |
| 10. | CSIR-SERC, New Delhi | Establishment of Wind Monitoring tower at Parangipettai. (Faculty of Marine Science) |
| 11. | NIIST, Kerala | Magnesium and Light Alloys |
| 12. | Mailam Industries Pvt. Ltd., Puducherry | Materials Joining |
| 13. | United States Dept. of Agriculture Mississippi, USA | Allelopathy of certain weed species |
| 14. | IACR- Rothamsted Experimental Station, UK | Commercial exploitation of herbicidal properties of <i>Coleus amboinicus</i> |
| 15. | VOGT, Germany | Fertilizer/chemical injector in Agriculture use. Geo humus and its utility in Agriculture. |
| 16. | NAIP-ICAR | Has generated research funds to a tune of Rs. 10 crores through NAIP scheme |
| 17. | Johns Hopkins University USA | Micronutrient research |

3.7.4 Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

Yes, the university-industry interaction resulted in establishment of many facilities for research in the university. These include

- Establishment of sophisticated research laboratories
- Procurement of Equipment like Scanning Electron Microscope.
- High-tech class room facilities.
- Fellowships to Students and Researchers.
- Sponsorship for conducting training programmes/ seminars / symposia.

Any other information regarding Research, Consultancy and Extension, which the university would like to include.

The Department of Science and Technology, Government of India in its assessment report on over 60 universities in India '*Measures of Performance of Universities in India: An Analysis of the Publication Output in Science and Technology (Study Period 1998-2008)*' has ranked Annamalai University in the 9th position (p. 102). With respect to discipline-wise ranking Annamalai University's performance is ranked **second** in Environmental Science, **fourth** in Energy, **fifth** in Engineering, **eighth** in Biological Sciences and **eleventh** in Agricultural Sciences.

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The **Scimago Institutions Rankings** published by **Scopus in 2012** ranked Annamalai University **seventh** among all Indian Universities and **twenty second** among all Indian Scientific Institutions (including CSIR, DRDO, etc.), based on publications, collaborations, impact factor, and *h*-index. **Team Careers 360** has ranked Annamalai University **twenty first** in its rating of the Top 100 best universities in India 2013 (<http://www.university.careers360.com/articles/top-100-universities-in-india-2013>) based on the following parameters: Publications in referred journals of the last ten years in two international databases; Web of Science (Thomson Reuters) and Scopus (Elsevier), Citations, and Patents.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

The infrastructure facilities and learning resources are key factors for creating the ambience to enhance the productivity of both staff and students. The University has excellent infrastructural facilities including adequate classrooms, air conditioned high-tech seminar halls with interactive boards for classroom teaching, spacious examination and valuation centres, auditoria, well equipped research laboratories, with sophisticated instruments and Computer labs with internet facilities. Apart from a full-fledged Centralized Library, dedicated and well equipped libraries are available in the Faculty of Engineering & Technology, Marine Sciences, Agriculture and Medicine. Adequate field units and farm facilities exist for practical classes and research pertaining to Agriculture and Horticulture.

The campus has a Sports pavilion with gymnasium, 18 hostels (for men and women), Internet browsing facility, Canteens, waiting rooms for women, and vehicle parking. The University has a well-furnished and comfortable Guest House which also has a seminar hall. A 24 X 7 Hospital with 1250 beds, advanced equipment and facilities such as CT Scan, Trauma, ICU and emergency units caters to the health care needs of students and faculty.

The University has 24 hours uninterrupted power supply and additional generators in various faculties. The campus has its own water supply system, including reverse osmosis water plants.

4.1.1 How does the university plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

Annamalai University has been constantly upgrading the infrastructure in the last seven years to keep pace with increasing demand and additional requirements with financial assistance from UGC, ICAR, DST-FIST, Ministry of Environment, DBT etc. The infrastructure was improved with the financial support of Rs. 207.00 lakhs through UGC XI Plan Grant. The research and computer labs are equipped with state-of-the art equipment and technology comparable with any top Universities in the country. The University has invested substantially over the last few years to improve the classroom and laboratory infrastructure, books and journals, and online resources for teaching, learning, and research.

Each department and hostel submits the infrastructural requirement for the forthcoming academic year. The Annual Budget is prepared based on these submissions and steps are taken to equip the departments with the facilities sought, such as extra classrooms, furniture, e-learning resources, equipment, consumables, accessories, upgrading existing systems and servers.

The University ensures that all the infrastructural facilities and resources are shared. A shift system is followed for optimum utilisation of classrooms and laboratories

and to. Seminar halls and ICT enabled classrooms are utilised by all the departments to conduct conferences and workshops on a sharing basis. The University transport facilities are booked in advance for field trips, educational tours, industrial visits and extension activities. The University Examinations are staggered and conducted in shifts to accommodate all the departments in the University. The major equipment and communication facilities are maintained by entering into an Annual Maintenance Contract. The Works Section of the University undertakes monitoring and maintenance of all the infrastructural facilities in the University and all complaints are attended to immediately.

4.1.2 Does the university have a policy for the creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

Yes, creation and enhancement of infrastructure to promote a good teaching-learning environment is a primary concern of the University.

A few recent initiatives in this direction include

- Provision of LCD projectors in departments to facilitate ICT-enabled teaching-learning resources.
- Establishment of multimedia laboratories.
- Well equipped Central Instrumentation Facility and research laboratories including Language Laboratory, Computer and Bioinformatics Labs, NMR lab, Tissue culture among many others.
- Department libraries with the latest collection of books, back volumes and national and international journals, internet facility, and subscription to electronic databases such as CABI and AGRICOLA.
- Information Desk that provides relevant information to students, faculty and all stakeholders.
- User-friendly University website with updated information on all academic, administrative and cultural aspects of campus life
- 24 x 7 h Uninterrupted Power Supply, and backup online UPS units in case of outages.
- Wi-Fi enabled departments and classrooms
- Well-equipped Gymnasium in the department of Physical Education and Sports Sciences. A separate indoor sports and Gymnasium facilities in some hostels.

4.1.3 How does the university create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

- Centralized laboratory/department laboratories are equipped with sophisticated/ latest analytical instruments such as Scanning Electron Microscope (SEM), UV-VIS and Atomic Absorption Spectrophotometer, Spectrofluorimeter, NMR, FTIR, HPLC, GC MS, microarray scanner, 2D-gel electrophoresis system, real-time quantitative PCR, MALDI-TOF, etc. to serve research needs.
- Sprinkler and Drip irrigation system and improved farm machineries like combined harvester and paddy transplanter in the experimental farms to assist field research activities.
- Other facilities such as scanner, printer, and photocopy machines are provided in each department.
- Behavioral science lab, SPSS lab, Animal house etc. also serve the research needs.
- Internet access to faculty and students. A separate browsing centre for Arts & Science students is available. The Central Medical Library is upgraded with internet and intranet facilities, adequate volumes of books and journals and INFONET facilities.
- Instrumentation and lab facilities are developed through schemes such as UGC-SAP and DST-FIST in each department. A sum of Rs. 405.60 lakhs was received through UGC XI Plan Grant towards the procurement of sophisticated equipment to the University Departments.

4.1.4 Has the university provided all departments with facilities like office room, common room and separate rest rooms for women students and staff?

Yes, available in all the departments.

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

Lifts and ramps facilitate access to classrooms and labs in some departments. Specially designed toilet facilities for the differently abled exist in some departments. Efforts are underway to extend these facilities throughout the University.

4.1.6 How does the university cater to the requirements of residential students? Give details of

All the students' hostels are within the campus situated close to the respective faculties ensuring easy and quick access to academic facilities.

* **Capacity of the hostels and occupancy**

| S.No | Name of the Hostel | Capacity | Occupancy |
|--------------|--|----------|-----------|
| Men | | | |
| 1 | E & T D J Hostel | 300 | 259 |
| 2 | E & T G J Hostel | 1200 | 201 |
| 3 | K.R.M. Hostel | 525 | 185 |
| 4 | Kurinji Illam | 575 | 552 |
| 5 | Malligai Illam | 900 | 425 |
| 6 | Men's Hostel for H / S | 400 | 180 |
| 7 | Mullai Illam | 1400 | 1256 |
| 8 | New Medical | 100 | 85 |
| 9 | P.G.D Hostel | 200 | 198 |
| 10 | Pothigai Illam | 175 | 154 |
| 11 | R.S.A. Hostel | 800 | 679 |
| 12 | Thendral Illam | 1000 | 874 |
| 13 | Travancore Hostel | 925 | 663 |
| Total | | 8500 | 5711 |
| Women | | | |
| 14 | Kayal Illam - Faculty of Marine Sciences | 100 | 65 |
| 15 | Rose Hostel | 975 | 792 |
| 16 | T.S.A. Nursing Students Hostel | 350 | 281 |
| 17 | Thamarai Illam | 2700 | 2463 |
| 18 | W.H.P. Hostel | 450 | 254 |
| Total | | 4575 | 3855 |

* **Recreational facilities in hostel/s like gymnasium, yoga centre, etc.**

Gymnasium facility, Yoga centre, Reading room with magazines, T.V. Room, etc. are provided in all the Hostels.

* **Broadband connectivity / wi-fi facility in hostels.**

A dedicated BSNL broadband connectivity with wi-fi facility is available at Kayal Illam. A separate wi-fi facility is available at RSA Hostel, Mullai Illam, Rose Hostel, W.H.P. Hostel, Thamarai Illam and Pothigai Illam. These facilities are being extended to all hostels in a phased manner.

4.1.7 Does the university offer medical facilities for its students and teaching and non-teaching staff living on campus?

The Rajah Muthiah Medical College Hospital (RMMCH) which is part of the University caters to the health care needs of students and faculty. The hospital is well equipped with 1250 beds, 24 X 7 casualty and facilities such as CT Scan, Echo-cardiogram, blood bank, diagnostic lab, trauma, ICU and emergency units.

- All students and staff have the benefit of being attended to at the *Staff and Student Clinic* for minor ailments.
- In case of ailments that require admission/specialist care, students are examined by experienced faculty at RMMCH and necessary investigations and interventions are performed free of cost to all inpatient students. There are special wards for staff & students
- 24h helpline/ambulance on call services in case of referrals
- In case of emergencies, when expert opinion is required a Fully Equipped Hospital on Wheels is available to transport patients to advanced centers.
- Various health programmes are conducted by faculty of RMMC including Master health check-up.

4.1.8 What special facilities are available on campus to promote students' interest in sports and cultural events/activities?

Annamalai University being unitary and residential with diverse disciplines provides an ideal setting for students to develop their all round personality.

- Students are encouraged to participate in state and national level cultural, sports, and literary programs such as UNMAAD, the cultural fest of IIM Bangalore, Talentia, a state level cultural competition, Youth South Zone Festival etc.
- Students take part in Youth Parliament contests coordinated by the Political Science department and have won Prizes at the State and National level.
- The Physical Education department is endowed with a plethora of sports facilities such as tennis, basket ball, volley ball, ball badminton, Kabbadi and kho-kho courts, indoor stadium and auditorium with audio facility.
- The Music College, the home for Carnatic Music especially Tamil Music which has produced internationally renowned artistes encourages students to hone their musical talents with a wide range of musical instruments as well as vocal music. The Music College conducts classes for students after working hours at time that is convenient for them.
- Intramural and interdepartmental Sports, Literary, and Cultural competitions are conducted annually and students are encouraged to participate in these events.
- The Gokhale Hall and other auditoria are made accessible to students over the weekends for cultural extravaganzas.

4.2 Library as a Learning Resource

The University prides itself on having a Central Library besides faculty and departmental libraries catering to the quest for knowledge of thousands of students of varied disciplines. The departmental libraries provide a quick and easily accessible learning resource at close proximity.

4.2.1 Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

Yes. The Library Advisory Committee consists of the Vice Chancellor as the Chairman, all Deans of Faculties as Members and the Librarian as the Convener.

Significant Initiatives of the Advisory Committee

- Rationalised budget allocation to individual departments.
- Streamlining procedures for purchase of books and e-resources
- Measures to minimize loss of books and journals
- Subscription to online journals accessible to all students and faculty
- Training to research scholars on use of e-resources
- Interlibrary transfer
- Dissemination of benefits of membership to INFLIBNET-NLIST to the departments.
- Providing access to library after working hours and on all holidays
- Organizing book exhibitions in the library
- Encouraging the Library staff members to attend faculty development programs, conferences, workshops related to Library, E-resources and latest technology implementation.
- Help in infrastructural developments in the Library.

4.2.2 Provide details of the following:

Departments in various faculties have separate libraries with adequate collection of subject books, few journals, annual reviews, etc.

| Details | Central Library | Engg. & Tech. Lib. | Medical & Dental Lib. | Agri. Lib | Marine Sciences |
|---|---|----------------------|-----------------------|---------------------------|-----------------------------|
| Total area of the library (in Sq.Mts.) | 4515 | 232.25 | 369.18 | 97.54 | 644 |
| Total seating capacity | 1000 | 200 | 200 | 50 | 32 |
| Working Hours : Working Days: | 8 a.m. to 8 p.m. | 8 a.m. to 8 p.m. | 8 a.m. to 10 p.m. | 9.30 a.m. to 5.30 p.m. | 9.00 a.m. to 7.00 p.m. |
| Working Hours : Holidays Days : | 9.30a.m. to 5.30 p.m. | 10 a.m. to 5 p.m. | 8 a.m. to 10 p.m. | 9.30a.m. to 1.00 p.m. | 10 .00 a.m. to 5.00 p.m. |
| Layout of the library | Yes. It is available in the respective Libraries. | | | | |
| Floor plan, sign board, fire alarm access to disabled users | | | | | |

4.2.3 Give details of the library holdings:

| Details | Print | | | Ave. No. of Books added during last 3 years | Non Print (Microfiche, AV) | Electronic (e-books, e-journals) | Special Collections (e.g. text books, reference books, reference books, patents) |
|-----------------------|---|-----------|--------|---|----------------------------|--|--|
| | Books | Back Vol. | Theses | | | | |
| Univ. Library | 150672 Transferred books to Dept.-243268 | 16032 | 10976 | 7577 | 3921 | e-journals-5496 | 14,666 |
| Engg. & Tech. Lib. | 56188 | | 5,026 | 2618 | - | UGC Infonet5496 IEEE-145 | 1833 |
| Agri. Lib | 15135 | 1845 | - | 622 | - | AGRICOLA, CABI, etc. | - |
| Medical & Dental Lib. | 22365 | 6108 | 250 | 727 | 418 CDs 50 Cassettes | e-journals - 584 Nat. J.-140 Int. J. - 108 | 8706 |
| Marine Sciences | 7587 | 3000 | 919 | 245 | | Nat. J. - 13 Int. J. - 3 | Text Book - 7031 Ref. Book - 556 |

4.2.4 What tools does the library deploy to provide access to the collection?

OPAC

- All facilities are available through appropriate tools like OPAC, LIBASOFT DBMS, Digital Library-DIGIX Software, E-Learning, etc.
- The users are offered a wide range of services like Online Access of Public Catalogue (OPAC).
- Developed Online Public Access Catalogue software to search books, printed journals, theses & reading material physically located in various sections.

* **Electronic Resource Management package for e-journals**

- UGC-Infonet
- Online reservation of books, internet and E-mail services, and CD-ROM searches. A local area network is established and about ten terminals have been made available to users to access the local database and CD-ROM database.
- IEEE pack is available in Faculty of Engineering & Technology Library.

* **Federated searching tools to search articles in multiple databases**

- JCCC (J-Gate Custom Content for Consortium)
- Search keys: Author Search; Title Search; Accession Number, Key word, Search, User wise, etc.
- AGRICOLA, CABI, CD-ROM database available in Faculty of Agriculture.

* **Library Website**

- A link to library has been provided in the University website and online servicing is made possible. <http://www.lib.annamalaiuniversity.ac.in>
- Faculty of Engineering & Technology Library website: www.annamalaiuniversity.ac.in/featlibrary

* **In-house/remote access to e-publications**

The institution makes use of INFLIBNET, DELNET, IUC Facilities in addition to ERNET, VSAT and other software J.CCC inform library network.

4.2.5 To what extent is ICT deployed in the library? Give details with regard to

| Details | Library Automation | Total No. of Computers for Public Access | Total No. of Printers for Public Access | Internet band width speed | Institutional Repository | Content Mgt. system for e-learning | Resource Sharing Networks/ Consortia |
|-----------------------|--|--|---|---------------------------|-----------------------------------|-------------------------------------|--|
| Univ. Library | Yes Nirmals & custom developed software | 50 | 3 | 1 GBPS | Question Bank | Virtual Ref. Lib., Media Lib. | UGC-INFONET |
| Engg. & Tech. Lib. | Yes LIBASOFT | 33 | 3 | 20 MBPS | Students' Project & Question Bank | Intranet access for books, journals | UGC-INFONET, DELNET, INDEST consortium |
| Agri. Lib | --- | 17 | 2 | 1 GB | - | - | - |
| Medical & Dental Lib. | Yes | 27 | 3 | 1 GB | - | - | - |
| Marine Sciences | Yes | 4 | - | 1 GB | - | - | - |

Library Automation

Modernization of the Library was started in 1995 with a special grant of Rs.50 Lakhs and a recurring grant of Rs.15 lakhs from UGC during the IX Plan Period. Under the X Plan, UGC sanctioned an amount of Rs. 35.85 lakhs for setting up Infonet-e-Journal Consortium.

Virtual Reference Library

Virtual Reference Library is an electronic database of encyclopaedias, free text-books, dictionaries, and specialized reference sources for multidisciplinary research. The VRL functions as a subject gateway for reliable and easily accessible source of information on the

web. It consolidates and aggregates electronic reference tools and techniques to improve competence of students and scholars. Now E-Question Banks are also available for students' reference.

Media Library

Education based electronic resources like audio, video, movie, digital pictures and animated movies etc are organized with subject categorization and maintained for various advanced services like digital library, media library & children's library.

4.2.6 Give details of specialized services provided by the library with regard to

| Details | Average No. of walk-ins | Average No. of books issued/ returned | Ratio of Lib. books to students enrolled | Average No. of books added during the last 4 years | Average No. of login to OPAC | Average No. of login to e-resources | Average No. of e-resources downloaded/ printed | No. of information literacy trainings organized |
|--------------------------|---------------------------------------|---------------------------------------|--|--|------------------------------|-------------------------------------|--|---|
| Univ. Library | 546/day 16380/month 196560/year | 1538 / 1496 | 20 : 1 | 9766 | 408 / day | 2206 / day | 2646 / month | 12/month |
| Engg. & Tech. Library | 377/day 11911/month | 850 / 879 | 5 : 1 | 1986 | 259/ day | 197 / day | 2500/ month | 4 |
| Agri. Library | 1600 / week | 300 / 274 | 8 : 1 | 622 | --- | 85/day | 43 / week | - |
| Medical & Dental Library | 4500 / week | - | 25 : 1 | - | 250 | 500 | 200 | - |
| Marine Sciences | 50 / day | 30 / 25 | 10 : 1 | 268 | - | 10/day | 10/day | - |

4.2.7 Give details of specialised services provided by the library with regard to

* **Manuscripts:**

A precious collection of 657 palm leaves and 22 paper manuscripts written in Sanskrit, Grantha, Tamil, and Telugu scripts.

* **Reference:**

Encyclopedia, Dictionaries, Competitive Exam Books, General Knowledge Books, Subject Oriented Reference Books, Directories, Yearbooks, Handbooks, Previous Year University Question Banks, Various Reports, etc.

* **Reprography:**

A Reprography service is available for books and periodicals in the library on a payment basis. Photocopying should be made in compliance with the copyright ordinance.

* **Inter-library Loan Service:**

Inter- Library Loan facility is available in the library. The users can now request books, journal articles, holdings, CDs, Audio/Video Cassettes available with various member libraries located inside and outside the country.

* **Information Deployment and Notification**

SMS, Mail, Notification and Bulletin Board, Circular

* **OPAC**

Service Provided to users for easy access

* **Internet Access**

1 GBPS, Leased line BSNL

* **Downloads**

- Journal articles, World Bank Publications
- The Central Library is a full-fledged depository member in World Bank. Now the World Bank publications are available through online mode. Online web-portals are created for the reference service and institutional repository service. Total number of World Bank books available in the library is 7550.

* **Printouts**

Nil

* **Reading list/ Bibliography compilation**

Nil

* **In-house/ remote access to e-resources :**

- Campus wide access to Journal Articles
- OPAC available in Intranet

* **User Orientation**

- The library takes an active part in organizing orientation programmes for the benefit of freshers in the beginning of the academic year and also arranges training program as and when a new facility is introduced. This helps the students to gain knowledge on the use of OPAC, CD-ROMS available in the library, using intranet and other information sources of the library effectively.
- A total 467 participants belonging to different faculties attended JCCC-INFONET training programme.

* **Assistance in searching Databases**

- JCCC and Web of Science facilities
- The DDR report of JCCC @ UGC INFONET from January 2012 to October 2012, reveals that 310 requests were received and in turn 376 requests were sent.

* **INFLIBNET/IUC facilities**

UGC Infonet Service. More than 9000 journal articles are accessible through 25+ online publishers in the UGC-Infonet lab. Inter library loan service like JCCC interlinked with 22 other libraries is available for Research Scholars. From 2008 to 2012 a total of 30,402 abstracts, 65,352 full articles were downloaded and 6,832 articles were provided as hard copies.

4.2.8 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

a) University Budget:

| S.No. | Faculty | 2007-08 (in Rs.) | 2008-09 (in Rs.) | 2009-10 (in Rs.) | 2010-11 (in Rs.) | 2011-12 (in Rs.) |
|-------|---------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1. | Arts | 215000 | 196000 | 131000 | - | - |
| 2. | Science & Marine Sciences | 370000 | 255000 | 88000 | - | - |
| 3. | Indian Languages | 25000 | 28000 | 20000 | - | - |
| 4. | Engineering & Technology | 540000 | 1029000 | - | 100000 | 1300000 |
| 5. | Education | 65000 | 85000 | 12000 | 10000 | 20000 |
| 6. | Agriculture | 400000 | 187000 | 206000 | - | - |
| 7. | Medicine | 5800000 | 4200000 | 3000000 | 3500000 | 2000000 |
| 8. | Dentistry | 2000000 | 2200000 | 2200000 | 2500000 | 2500000 |

b) XI Plan Budget (01.04.2007 to 31.03.2012):

| S.No. | Faculty | Central Library | | Department Library | |
|-------|---------|------------------|---------------------------|--------------------|---------------------------|
| | | Amount in Rs. | No. of Books Purchased | Amount in Rs. | No. of Books Purchased |
| Total | | 9,68,790 | 2,344 | 69,82,458 | 15,916 |

Budget for Journal Subscription

| S.No. | Faculty | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Total |
|-------|---------|---------|---------|---------|---------|---------|---------|----------|
| Total | | 6005256 | 2652604 | 2671293 | 2448694 | 2156360 | 2678271 | 14597478 |

4.2.9 What initiatives has the university taken to make the library a 'happening place' on campus?

The university has taken the following initiatives to make the library a 'happening place'.

- Holding book exhibitions and displays of books and library holdings in the library premises
- Periodical and regular orientation programmes for freshers.
- Advanced training programme for research scholars.
- Document delivery service to the scholars of other universities.
- Offering *wi-fi* environment to promote the use of E-resources.
- Sufficient infrastructure with good lighting, ventilation and comfortable furniture in spacious reading halls that attract students.
- Students are induced to refer library material by giving assignments.
- Slot allocated in the time table for library reference work in the weekly schedule. This inculcates reading habit. This will also enable students to take part in competitive exams.
- The new arrivals are informed from time to time through circulars or during staff meetings and academic gatherings like credit seminars.
- Whenever new facilities like internet or software are introduced, demonstration is organized for both staff and students
- Library as a major platform to conduct E-resource usage programmes.

4.2.10 What are the strategies used by the library to collect feedback from its users? How is the feedback analysed and used for the improvement of the library services?

- The users are encouraged to record their views and comments in a feedback register.
- A Faculty in the department is appointed as in-charge of the department library and he/she receives the feed-back.
- The feedback is analysed in the library council meeting and steps initiated for the improvement of the library services.
- The following improvements have been made based on the feedback: additional books and journals, photocopying facilities, increased browsing time, and enhanced internet performance.

4.2.11 List the efforts made towards the infrastructural development of the library in the last four years.

- Seating capacity has been increased to accommodate more students.
- Audio and video aids are added to improve learning outcomes
- E-resources
- Treatment against termites and silver fish to safeguard books
- Additional space, furniture, book shelves, and CD Rom databases are provided.
- Upgradation of network facilities from the main server.

4.3. IT Infrastructure

4.3.1 Does the university have a comprehensive IT policy with regard to

- * **IT Service Management, Information Security, Network security** - Yes.
The University provides information and network security from unauthorized access, modification or destruction. The Computer Science Department helps faculty and students to manage threats and prevent security breaches.
- * **Risk Management, Software Asset Management, Open Source Resources, Green Computing** - Yes
Firewalls and other access control methods are in place. The process of implementing green computing is in the pipeline.

4.3.2 Give details of the university's computing facilities i.e., hardware and software.

- * **Number of systems with individual configurations**

(Le novo Think Centre A55 Series)

Pentium Dual Core E2140 Processor @ 1.60GHz / 2*1 MB L2 Cache / 512MB DDR2 SD RAM@533 MHz / 946 Gz Chipset MB / 19" TFT Monitor / 160 GB SATA HDD (7200 RPM)/ 10/100/1000) MBPS Ethernet / Integrated Graphics / Combo Drive (DVDR - CDRW) / 1 Serial port / 4 USB Ports / 1 Parallel Port / 2 PS2 Ports / PS2 Keyboard / USB Optical Scroll Mouse / Mini Tower Cabinet. **Wireless Network - 91 Nos**

Intel Core 2 Duo E7400(2.8GHz) Processor /1066Mhz FSB / 3 MB L2 Cache / 4GB DDR2 (2X2 GB) RAM 800mhz / G31 Chipset MB / 20" TFT Acer Monitor / 160 GB SATA HDD/DVD Writer / 6 USB Ports / 10/100/1000 MBPS Ethernet / Acer Keyboard / Optical Mouse. **- 272 Nos.**

(HP COMPAQ DX 2700)

Intel P4@3.0 GHZ(H.T) Processor Q963 Chipset - 512 MB DDR2 RAM - 80 GB HDD SATA - 1 MB L2 Cache - HP Keyboard - HP Optical Mouse - 10/100 GB Network Card - HP Cabinet - 17" HP Color Monitor. **- 35 Nos.**

(HP COMPAQ DX 2080)

HP Business PC / HP Dual Core 3.0 GHz Processor – Intel 946 Chipset MB – 2*2 MB L2 Cache Memory – 160 GB HDD (SATA) – 512 MB DDR2 RAM – HP 17" CRT Monitor – HP Keyboard – Optical Scroll USB Mouse – 10/100 Network Card – 4 USB Ports – HP Micro Tower Cabinet - **50 Nos.**

PIV / 3.06 GHZ / 512 MB DDR-2 RAM / 80 GB SEAGATE SATA HDD / 15" SAMSUNG COLOR MONITOR / ON BOARD NIC / PS2 LOGITECH KB / OPTICAL SAMSUNG MOUSE/MERCURY SMPS / INTEL D102GGC2 MOTHER BOARD / TRANSCEND RAM - **56 Nos.**

(Le novo Think Centre 9439 BGQ)

Intel Dual Core E2160 Processor / 1GB DDR2 RAM / Intel G31 Chipset MB / LENOVA 19" TFT Monitor / 160 GB SATA HDD/ 10/100 Ethernet / Intel Graphics Media Accelerator 3100 / Multi DVD RW / Keyboard / Optical Mouse. - **50 Nos.**

(HCL System)

Intel Core 2 Duo E7300(2.66GHz) Processor /3 MB L2 Cache / 1GB DDR2 RAM 667 Mhz / Intel G31 Chipset MB / HCL 19" Wide LCD Monitor / 160 GB SATA HDD 7200 RPM / Internal DVD Writer / Onboard 10/100/1000 MBPS LAN/ HCL Keyboard /Integrated Display Controller & Sound Controller /Optical Mouse. - **40 Nos.**

Corei-5 2320 3 GHZ, 2Nd Generation , H61 chipset MotherBoard, 2 GB DDR3 RAM , DVD Super Multi Driver, 500 GB HDD , 18.5" LCD Monitor, 1000 Mbps Ethernet Interface, Multi Media Keyboard / Optical Mouse. - **74 Nos.**

P IV and P III systems - **64 Nos.**

Lenovo Thinkstation E20 Workstation / Processor: Intel Xeon X3430(8 MB Cache, 2.40 GHz) / 4 GB ECC DDR3 PC3 1333 MHZ / DVDRW / 500 GB SATA HDD / Lenovo 22" TFT wide Monitor / nVidia Quadro FX 600 / 1 GB Graphics / Intel 3450 Chipset / USB Standard Keyboard / USB Optical wheel Mouse / Case material black / 6 USB Ports / (2 front and 4 rear / Gigabit Ethernet / Win 7 Prof 64 bit / Certified for Windows & Linux. - **9 Nos.**

Servers:

IBM Server: **1 No.**

Xenon/2.8 Ghz/512 MB DDRAM/2*36.4 GB HDD/1.44 FDD/40 X CDROM/IBM Serial Mouse/IBM Serial KB/15" IBM Monitor.

IBM AIX Server: **1 No.**

IBM AIX Server P5 505 series/ power 5 CPU @ 1.65 Ghz/1GB RAM/73 GB HDD/DVD ROM Drive/ KB/Mouse/15" TFT Color Monitor.

IBM X226 Xeon Server:

1 IBM X226 Xeon Tower Server / Intel Xeon 3.0 Ghz / 2 MB LZ Cache with 64T / 800 MHz FSB/1 GB ECC DDR2 RAM / Ultra U320 SCSI Controller / 73 GB SCSI Hot Swappable HDD / 10/100/1000 MBPS On Board / Ethernet Controller / 48X CD RAM Drive / 17" IBM Color Monitor.

Novel Server:**2 Nos.**

Intel Pentium 166 Mhz/32 MB EDORAM/2*2 GB HDD/1.44 FDD / 8 X CDROM/Serial Mouse/Serial KB/14" SVGA Mono Monitor

HP Server:**1 No.**

Intel PIV / 1.7 GHZ / 256 KB CACHE / 128 MB ECC SDRAM / 18.2 GB SCSI HDD/48X CD ROM Drive/ 15" HP Color Monitor/ HP Mouse

Sun Server:**1 No.**

SUN 280R / 1 GB RAM / 36 GB HDD / 17 "COLOR MONITOR / KB /MOUSE / DVD DRIVE.

IBM Server:**3 Nos.**

IBM Servers X3550(1U) dual CPU E5520@2.6 GHZ/800 MHZ/4 MB L3,18 GB DDR3/2 x 300 GB, 10K rpm HDD / Dual Port FC HBA / 2 X Dual Port NIC / DVD - RW Ultra Slim enhanced, 675 W RPS

SUN Fire Server:**2 Nos.**

CC TO 3587 B13 - UQ2 - CC - 8 GB

B13 - UQ2 - CC 8GB - KD6 X 4150 2X E5440 CPU - X311L - 4X 2GB RAM

IBM Server:**1 No.**

IBM Xx 3200 Xeon Tower Server / Intel Xeon 3.0 GHz / 6 MB L2 Cache with 64T / 1000 MHZ FSB / 4 GB ECC DDR2 RAM / Ultra U320 SCSI Controller / 146 GB SCSI Hot Swappable HDD / 10/100/1000 MBPS Onboard / Ethernet Controller / DVD RW / 21" IBM Color Monitor.

HP Server:**1 No.**

HP Proliant ML 350 G6 Tower Server / Quadcore Intel Xeon 5620@2.4 GHZ / 6 GB DDR3 RAM / DVD ROM Drive / HP 300 GB HDD /3 G SAS 10K 2.5 in DP ENT HDD & HP 146 GB 3G SAS 10K 2.5 in DP ENT HDD / 21" HP LCD Monitor / Keyboard / Mouse.

- * **Computer-student ratio** : **1 : 1**
- * **Dedicated computing facilities:** **Available in all faculties**
- * **LAN facility** : **Available**

* **Proprietary software**

| | |
|---|---|
| 3D Studio ACADEMIC VMWARE ACADEMIC VMWARE Assembler Software Autocad Ver 14 Borland Turco C++ Character Studio Corel Draw Ver 5.0 Dragon(Naturally Speaking Software) Electronic Circuit Designer Expert Tutor Software Form Print Integra - SQL Ver 3.0 Linux Matlab Micro Soft Visual Studio Professional MS C Compiler Ver 6.0 MS Office Ver 4.0 MS Windows NT Ver 4.0 MS Windows SDK Ver 3.0 MS Windows Ver 3.0 MSDN Academic Alliance Software Netware Ver3.11 Novell dos ver 7.0 | Oracle 8.03 Oracle Developer 2000 Orcad Pc Focus Ver3.1 PCB Art Work Designer Power Builder Ver 4.0 Pramati Edupack Rational Seed Program Red Hat Linux Sco Unix Software Shree Lipi Shree Lipi, Ver 3.0 SMART CLASS/ LESSON PACKAGE Softtek Cobol Student appraisal System Software Package Sybase Nlm Ver 4.6 Turbo Analyst Unix Software, C , Cobol, Basic, Fortran, Microsoft C Visual Foxpro Visual Studio Windows 95 (Win 3.0 with SDK) Windows 98 |
|---|---|

* **Number of nodes/ computers with internet facility**

The University has campus network facility with 1750 nodes.

* **Any other (please specify)**

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Virtualization Lab is established to enable all the staff and students to perform high performance computing. Fibre-optic cables are available for faster and efficient connectivity. Old and outdated computers are upgraded periodically. They are either replaced or enhanced with respect to configuration. Additional computing facilities are added based on the need arising out of requirements of students, research scholars and faculty. Sophisticated computing facilities are also added through various research projects.

4.3.4 Give details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research.

Online resources like NPTEL, OCW from MIT, CMU materials are made available to staff and students. The students are given exposure to various web sites and packages related to the subject to supplement class room teaching.

Eg. The virtual lab facility available in the web is introduced to the students.

4.3.5 How does the university address issues such as authenticity and copyright with regard to online resources that lie outside the university?

Attempts are made to periodically check such issues and appropriate Software has been installed in campus wide network. Further, the Heads of the Departments and Research Supervisors oversee the materials used for presentations, seminar preparations and dissertations done by the students to ensure that there is no violation of copyright.

4.3.6 What are the new technologies deployed by the university in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges?

- Cloud computing facility.
- Students are encouraged to submit their assignments online
- Management games are taught using internet
- Computer labs are introduced to enhance knowledge.
- E-Learning Centre, CBTs, Resources from NPTEL, etc.
- Criteria for evaluation of credits pertaining to seminar, research have been clearly spelt out and well defined.
- Student centric assignment preparation (with marks allocated in the examination) lends to individualised learning possible.

4.3.7 What are the IT facilities available to individual teachers for effective teaching and quality research?

Internet access is provided in all the department of study for effective teaching and to promote research. Further subscription to many e-journals and online resources by the university helps students and faculty to keep themselves abreast of the latest developments in their areas of research.

4.3.8 Give details of ICT-enabled classrooms/learning spaces available within the university? How are they utilized for enhancing the quality of teaching and learning?

Most departments have portable LCD projectors that can be used in any classroom, some departments have ICT- enabled classrooms. Hi-tech class rooms have interactive boards. Facilities such as multimedia lab, Digital Document Camera, Language Lab, Phonetic Lab., Computer Lab, Bioinformatics Lab, Internet, LCD, Tape Recorder, Television etc also enhance the quality of teaching and learning.

4.3.9 How are the faculty assisted in preparing computer- aided teaching-learning materials? What are the facilities available in the university for such initiatives?

Computer Programmers in the departments help teachers in preparing computer-aided teaching-learning materials. The software and instruments required such as ADOBE e-learning suite, AUTOCAD etc are made available in every faculty. An

audio-visual laboratory helps teachers in preparing e-lessons. Staff members encouraged to attend workshops that impart training to prepare these materials.

4.3.10 How are the computers and their accessories maintained?

Computers are protected from malicious programs by installing suitable antivirus software. The Department of Computer Science and Engineering has a dedicated hardware laboratory with personnel to maintain hardware. This service is extended to the entire university. Computer service Engineers in the University are responsible for the maintenance of the Computers. With the help of technical staff in the computer service wing of the Department of Computer science, FEAT, computers and accessories are maintained in all the departments. Annual Maintenance Contract (AMC) with companies facilitates maintenance of systems and electronic gadgets.

4.3.11 Does the university avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes. Access to e-journals is availed through INFLIBNET, DELNET, IUC facilities in addition to ERNET and other software.

4.3.12 Does the university avail of web resources such as Wikipedia, dictionary and other education enhancing resources? What are its policies in this regard?

Yes. The University policy allows access to all education enhancing e-resources which are in public domain as per the IT policies existing in the university. However, plagiarism from these resources is strongly discouraged.

4.3.13 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the university?

| S.No. | Faculty | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|-------|--------------------------|---------|---------|---------|---------|---------|---------|
| 1. | Arts | 430000 | 210000 | 185000 | 189000 | 201000 | 299500 |
| 2. | Science | 202500 | 182500 | 205000 | 190000 | 130000 | 170000 |
| 3. | Marine Sciences | - | - | - | 10000 | 10000 | 10000 |
| 4. | Indian Languages | - | 5000 | - | - | - | - |
| 5. | Engineering & Technology | 830000 | 3212000 | 2135000 | 3281000 | 3368000 | 2536000 |
| 6. | Education | 46000 | 70000 | 70000 | 80000 | 155000 | 180000 |
| 7. | Fine Arts | 5000 | 5000 | 5000 | 5000 | 2000 | 5000 |
| 8. | Agriculture | 199500 | 250000 | 46000 | 415000 | 345000 | 410000 |

4.3.14 What plans have been envisioned for the gradual transfer of teaching and learning from closed university information network to open environment?

- Field exposure through Rural Agricultural Work Experience, Industrial visits, Research institutes and laboratories through educational tours provide students practical knowledge on the latest technologies.
- Video conferencing facility enables utilizing the expertise of international / national experts.
- Telemedicine facility is available in the Faculty of Medicine that helps in sharing of expertise.
- Academy-Industry Interaction and internship in industries will help students to face real-life situations in their future career
- Establishment of industrial cell in the Faculty of Engineering and Technology helps in sharing expertise gained by the Faculty with Industry.

4.4 Maintenance of Campus Facilities

4.4.1 Does the university have an estate office / designated officer for overseeing the maintenance of buildings, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

The University has University Works Division comprising civil, electrical, water supply, public health and other divisions that manage the university infrastructure. The Department of Horticulture maintains the gardens and the landscaping. A dedicated land section oversees the maintenance of university lands.

Specific Initiatives undertaken

- Committees have been constituted to improve the physical ambience.
- Saplings have been planted throughout the sprawling campus and the trees are tagged with the botanical and common names.
- The main avenues of the campus are studded with colorful plants that provide a pleasant ambience.
- Tall evergreen trees stand testimony to the 85 year old heritage of the University.
- The University has been declared a Tobacco-Free campus and sign boards to this effect are displayed in prominent place.
- The campus roads are litter-free and plastic-free.
- The security in the campus has been beefed up
- The University canteens are refurbished
- All departments display eco-friendly posters to save water and electricity.

4.4.2 How are the infrastructure facilities, services and equipments maintained? Give details.

The Works Division maintains the infrastructure facilities. A dedicated team of electricians, plumbers, carpenters and other personnel provide round the clock service to departments, hostels and quarters. In every department one of the staff members is assigned to oversee the laboratories and equipment, vehicles if any, farm or orchard etc. He /She is responsible for safe and smooth maintenance of the equipment, and facilities. Log book is maintained to ensure entries and problems if any. The Heads of the Departments supervise all the facilities. Annual Maintenance Contract (AMC) is entered into for most of the services and equipment.

Any other information regarding Infrastructure and Learning Resources which the university would like to include.

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

Student mentoring and support has been a primary focus of the University and the residential nature of the University has made it a reality. The students are mentored from the time of admission up to the completion of their programme at various levels. Counselling is done at the admission point to guide students to the various programmes of study available in the University. The teaching and non-teaching staff guide the students regarding the formalities for admission and help them settle down in the new environs. The authorities of the University welcome the students on the Commencement Day, a practice that motivates and inspires the students. At the department level, the students are provided the required guidance and counselling by the Head of the Department and faculty during the period of study. In addition, faculty members are assigned the additional responsibility of functioning as Wardens/Deputy wardens in the Hostels for lending personal support. Further, some non-teaching staff are appointed as in-house wardens and matrons for round the clock support to students.

Students in each class are assigned to teachers who serve as counsellors/mentors. Teachers meet the assigned students periodically to guide them with the curriculum, monitor their progress, and provide intellectual and emotional support, and make the appropriate choices for optional and add-on courses, apply for scholarships, undertake research projects, and attend campus interviews.

Remedial classes and peer learning are organized to help slow learners. The students are also encouraged to participate in co-curricular and extracurricular activities. The Co-ordinators of NSS/NCC/YRC in each department enrol student members to instil social responsibility.

During their stay, students can avail themselves of a number of support systems and services for information, academic and career guidance, financial, co-curricular and extracurricular activities. The Information Desk in the Administrative Block provides necessary information for students on all aspects of campus life. The academic calendar and handbook give information on the academic schedule and curriculum. Students can make use of both the Central and departmental libraries for reference work, and computer and internet services for browsing. The scholarship section provides information on various financial support schemes. The Music College is a boon for music lovers and for those who aspire to learn music as a pastime. The Physical Education department with the gymnasium, impressive courts and tracks provides avenues for sports and games. Other support services include redressal of Students Grievances through SMS, counselling by faculty in the Psychology department, in house language laboratories, Placement Cell, Equal Opportunities Cell, Alumni Associations, and canteen. The students are also provided medical support from the Rajah Muthiah Medical College & Hospital. A medical insurance scheme has been introduced for the benefit of students.

5.1.2 Apart from classroom interaction, what provisions are available for academic mentoring?

Specific programmes such as Industrial visit, Internship programmes, Educational tours, Rural Agricultural Work Experience through the village stay programme, industrial tie-up programmes and MoUs with national and international institutions offer ample scope for hands-on training. Besides, students are given personal counselling and remedial coaching is provided for students who require extra attention. Special coaching classes for competitive examinations are provided for advanced learning.

Various research societies/associations at department and faculty levels invite eminent scholars and scientists for interactive sessions with students and faculty. Organizing community visits, rural and urban health centre postings, and visits to centres of repute, help in academic mentoring. The university encourages the students to participate in exchange programs with other institutions, inter-college / university academic programs, Conferences and conventions provide students with beyond the classroom academic experience. On an average, 40 seminars / conferences / workshops are conducted every year in all the faculties for academic and research exposure.

5.1.3 Does the university have any personal enhancement and development schemes such as career counselling, soft skill development, career-path-identification, and orientation to well-being for its students? Give details of such schemes.

Yes, Training and Placement Cell offers career counselling. Training programmes are conducted for entrepreneurship and personality development by the University's Business School. The departmental societies invite renowned academicians and entrepreneurs including alumni to guide students in their career path. Soft skill development has been introduced as part of the curriculum in the Faculties of Arts, Science, Marine Sciences, Engineering & Technology and Agriculture. It is mandatory to acquire four credits for soft skills for successful completion of Postgraduate programmes. Classes are conducted for NET / SET and coaching classes for Civil services aspirants.

5.1.4 Does the university publish its updated prospectus and handbook annually? If yes, what are the main issues / activities / information included / provided to students through these documents? Is there a provision for online access?

Yes.

The prospectus and application forms for various programmes with respect to admission and examinations are published in print and electronic version. These contain information on the programmes offered, structure of the programmes, number of semesters, duration, eligibility for admission, credits, marks and grading, requirement of attendance, examination pattern, evaluation and syllabi, various scholarships, prizes & endowments, magazines, student welfare activities, campus amenities, UGC schemes,

teaching and non-teaching staff details. The departments prepare a handbook as per the recommendations of the Boards of Studies and issue to students and faculty members every year. Students download their syllabi, model questions, various forms, applications through our university website (www.annamalaiuniversity.ac.in) also.

5.1.5 Specify the type and number of university scholarships / freeships given to the students during the last four years. Was financial aid given to them on time? Give details (in a tabular form) for the following categories: UG/PG/M.Phil/Ph.D./Diploma/others (please specify).

| S.No. | Name of the University Scholarship / Endowment Scholarship | Total No. of beneficiaries in the last four years (from 2008 to 2012) | | | | |
|-----------|---|---|--------------|------------|------------|------------|
| | | UG | PG | M.Phil | Ph.D | Diploma |
| 1. | University Research Studentship | | | | | |
| | 2008-2009 | - | - | - | 60 | - |
| | 2009-2010 | - | - | - | 70 | |
| | 2010-2011 | - | - | - | 67 | - |
| | 2011-2012 | - | - | - | 72 | - |
| | Total | - | - | - | 269 | - |
| 2. | Music Stipend | | | | | |
| | 2008-2009 | - | - | - | - | 130 |
| | 2009-2010 | - | - | - | - | 95 |
| | 2010-2011 | - | - | - | - | 105 |
| | 2011-2012 | - | - | - | - | 103 |
| | Total | - | - | - | - | 433 |
| 3. | Endowments (includes Vallalar & Ramasamy Padayatchiar) | | | | | |
| | 2008-2009 | 141 | 229 | 19 | 14 | 16 |
| | 2009-2010 | 137 | 232 | 18 | 15 | 16 |
| | 2010-2011 | 136 | 251 | 24 | 14 | 13 |
| | 2011-2012 | 127 | 225 | 24 | 11 | 20 |
| | Total | 541 | 937 | 85 | 54 | 65 |
| 4. | SC/ST & SC Post-metric scholarship | | | | | |
| | 2008-2009 | 3006 | 3890 | 82 | 5 | 92 |
| | 2009-2010 | 4406 | 3520 | 197 | 40 | 46 |
| | 2010-2011 | 5592 | 3821 | 286 | 106 | 42 |
| | 2011-2012 | 7169 | 4611 | 191 | 299 | 62 |
| | Total | 20173 | 15842 | 756 | 450 | 242 |

| S.No. | Name of the University Scholarship / Endowment Scholarship | Total No. of beneficiaries in the last four years (from 2008 to 2012) | | | | |
|-----------|--|--|--------------|-------------|-------------|--------------|
| | | UG | PG | M.Phil | Ph.D | Diploma |
| 5. | P.G. Women scholarship (SC/ST) | | | | | |
| | 2008-2009 | - | - | - | - | - |
| | 2009-2010 | - | 1 | - | - | - |
| | 2010-2011 | - | 4 | - | - | - |
| | 2011-2012 | - | 5 | - | - | - |
| | Total | - | 10 | - | - | - |
| 6. | Rajiv Gandhi National Fellowship | | | | | |
| | 2008-2009 | - | - | 9 | 5 | - |
| | 2009-2010 | - | - | 12 | 13 | - |
| | 2010-2011 | - | - | 22 | 5 | - |
| | 2011-2012 | - | - | 17 | 48 | - |
| | Total | - | - | 60 | 71 | - |
| 7. | 92 TNER (Tuition fees concession) | | | | | |
| | 2008-2009 | 3483 | 3646 | 234 | - | 98 |
| | 2009-2010 | 4397 | 3970 | 186 | - | 48 |
| | 2010-2011 | 5590 | 4409 | 309 | - | 43 |
| | 2011-2012 | 7271 | 4740 | 228 | 116 | 47 |
| | Total | 20741 | 12025 | 957 | 116 | 236 |
| 8. | BC/MBC/DNC/Free education & Post metric scholarship | | | | | |
| | 2008-2009 | 2456 | 473 | 54 | 8 | 2991 |
| | 2009-2010 | 2672 | 540 | 67 | 5 | 3290 |
| | 2010-2011 | 2502 | 830 | 113 | 21 | 3466 |
| | 2011-2012 | 2954 | 960 | 83 | 61 | 4058 |
| | Total | 10584 | 2803 | 317 | 95 | 13805 |
| 9. | Higher Education Special Scholarship | | | | | |
| | 2008-2009 | 1681 | 1658 | 95 | 29 | 3463 |
| | 2009-2010 | 1812 | 1959 | 83 | 37 | 3891 |
| | 2010-2011 | 1918 | 1077 | 21 | 59 | 3075 |
| | 2011-2012 | 3304 | 1550 | 48 | 84 | 4986 |
| | Total | 8715 | 6244 | 247 | 209 | 15415 |
| | Grand Total (1+2+3+4+5+6+7+8+9) | 60754 | 37861 | 2422 | 1264 | 30196 |

5.1.6 What percentage of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)?

| Faculty | Programme | Percentage of students that receive financial assistance |
|---------------------------------------|-----------|--|
| Faculty of Science | PG | 57 |
| | M.Phil. | 57 |
| | Ph.D. | 24 |
| Indian Languages | PG | 80 |
| | Ph.D | 80 |
| Faculty of Engineering and Technology | UG | 65 |
| | PG | 68 |
| | M.Phil. | 56 |
| Agriculture | UG | 40 |
| | PG | 60 |
| Fine Arts | UG | 100 |

5.1.7 Does the university have an International Student Cell to attract foreign students and cater to their needs?

Yes. The University has an International Student Cell to attract foreign students and cater to their needs. Office of the Advisor, International Students Association is a nodal point for admission to Annamalai University. The Advisor of International Students Cell maintains close liaison with the Indian Council for Cultural Relations (ICCR) as well as with the Heads of the Departments of the University with respect to the programs for the International Students and also caters to the needs and the welfare of these students. Around 500 students from Rwanda, Kenya, Congo, Burundi, Ethiopia, Somalia, Sri-Lanka, Myanmar, and Libya are enrolled for different programmes of study in the University.

5.1.8 What types of support services are available for

*** overseas students –**

The International Students' Advisor and members of the faculty concerned ensure the safety and security of overseas students in the campus, their visa requirements and issues, their accommodation and boarding and provide information on academic matters, norms of the University, and Indian culture and traditions. Students from overseas are housed in a dedicated International Youth Hostel with all amenities. The Gokhale Hall is made available to the students on weekends for religious and cultural activities. Family visits are organized for international students on short visit to experience the Indian way of living. The International Students Cell supports the activities of overseas students.

* **physically challenged / differently-abled students**

While some departments have ramps and lifts for differently-abled students, efforts are underway to make all academic and administrative blocks accessible in a phased manner. Resident students are housed in the ground floor and wherever possible, classes are also held in the ground floor or in buildings with ramps and lifts. The classmates and faculty of these students extend maximum support to these students. Special quota is followed in the process of admission. The University takes special efforts to provide scholarships and endowments to support these students and faculty have provided a specially designed two-wheeler for a differently-abled girl student.

* **SC/ST, OBC and economically weaker sections**

SC/ST/OBC and economically weaker sections students are supported through government and welfare schemes. The Equal Opportunities Cell spreads awareness about the various welfare schemes of the government. In addition to support for tuition fees, and hostel accommodation, the economically weaker sections are also provided free access to books and training in computers. National Eligibility Test (NET) coaching classes are organized for SC/ST students. Books are purchased for this purpose and model question papers downloaded and supplied to the students. Remedial coaching classes are conducted after class hours to improve academic performance.

* **students participating in various competitions/conferences in India and abroad**

Students, NCC cadets and NSS volunteers participating in various cultural and sports events at national level are sponsored by the University. P.G. students attending international conferences are partially supported with financial assistance. All research scholars are supported by departmental associations or research projects to attend and present papers in conferences.

* **health centre, health insurance etc.**

A well equipped 24 x 7 emergency care hospital of the Faculty of Medicine serves the students of the university. The students get good treatment free of cost. Health insurance facility for students is available and the university has a tie-up with private health insurance companies for providing health insurance to the international students as per the norms.

* **skill development (spoken English, computer literacy, etc.)**

Language for communication and basic computer courses are included in the regular curriculum for the students to develop their communication and computer skills. Students can make use of the language laboratories and the English department faculty for advanced needs such as appearing for TOEFL examination. Besides a dedicated Computer Science department that caters to students' requirements, most departments have a computer lab that is accessible for both students and research scholars. Training and Placement Cell provides skill and personality development programmes.

* **performance enhancement for slow learners**

Remedial classes are held after working hours for slow learners. These students are provided opportunities for improvement by conducting special tests and providing reading material.

* **exposure of students to other institutions of higher learning/ corporates/business houses, etc.**

The students are taken on educational tours to visit institutions of higher learning, various central and state research institutes, and industries located in the various parts of the country. They are also encouraged to undertake summer and winter training programmes, internship, and research projects in research institutions and in corporate/business houses as part of the curriculum.

* **publication of student magazines**

Student magazines are published annually in several departments including 'REVERB', Grains of Gold and Silver and Newsletters.

5.1.9 Does the university provide guidance and/or conduct coaching classes for students appearing for Civil Services, Defense Services, NET/SET and any other competitive examinations? If yes, what is the outcome?

Yes. The university conducts coaching classes for civil services and other competitive examinations like NET/SLET / JRF / ICAR / GATE / GRE / TOEFL etc. The University has a centralised coaching unit for civil service aspirants. Every faculty takes adequate measures to prepare students by providing suitable reading materials through library. Many students have cleared NET/SET / JRF / ICAR / GATE/GRE/TOEFL examinations in recent years. Several students have gained admission in reputed research institutions in the country after clearing NET/GATE examinations. Many students have got selected in TNPSC.

5.1.10 Mention the policies of the university for enhancing student participation in sports and extracurricular activities through strategies / schemes such as

- * **additional academic support and academic flexibility in examinations is made available in terms of credit of attendance, altered scheduling of examinations (practical) etc.**
- * **special dietary requirements, sports uniform and materials**
- * **any other (please specify)**

- A special quota as per Government norms is followed to admit students with a proven track record in Sports and Games in all the programmes offered by the University.
- Credit of attendance is given to students for participation in state and national level sports Meet.
- The hostels provide special dietary requirement for sports persons.
- The Physical Education Department offers sports uniform and materials for team members.
- University provides hostel and mess fee concession for those who participate in state and national level sports and games.
- The outstanding sports personalities are given cash awards.
- Student Associations pertaining to each faculty enhances students' participation in sports and extracurricular activities under the guidance of staff advisers.
- High altitude camp is conducted every year to develop a spirit of adventure and conquer the fear of altitude.
- Flexibility is also shown in computing credit of attendance and scheduling examinations, to the extent possible within the limits of existing norms for sports & games participation.

5.1.11 Does the university have an institutionalized mechanism for students' placement? What are the services provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

The Placement Cell imparts training to students to meet the challenges in the job market by organizing group discussions and lectures on how to face interviews and to develop entrepreneurship skills. Besides this, the departmental associations invite experienced faculty and corporate managers including alumni to prime students for a future career. Varied stakeholders such as NGOs, Companies, Industries, Banking sector, and others have recruited a large number of students over the years in campus interviews conducted through the Placement Cell. The job opportunities and call for the admission to PG and Ph.D. courses by various Universities / Institutions are displayed on the notice board for the benefit of final year UG and PG students.

5.1.12 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).

Total number of students who got selected in the last four years through Campus interviews by different employers

: **6944**

List of Employers who provided recruited students after campus interviews:

| S. No. | Name of the Company |
|--------|---|
| 1. | Agricultural Insurance Company of India Ltd |
| 2. | AKT Academy, Kallakurichi, Villupuram Dt., Tamilnadu |
| 3. | Alchem International Ltd. |
| 4. | Alltech, Bangalore, American based Company |
| 5. | Alpha Educational Institution |
| 6. | Ant HR Consultance Chennai |
| 7. | Apache Cotton |
| 8. | Aparajitha Corporate Service (P) Ltd., |
| 9. | AR Consultancy, Chennai |
| 10. | Auto Axless Ltd |
| 11. | Auto parts Asia Ltd |
| 12. | Avanti Feeds Ltd., Narsapuram, A.P. |
| 13. | Axix ITT, Chennai |
| 14. | Bajaj Alliance |
| 15. | Bayer Crop Science |
| 16. | BGR Energy System Ltd, Chennai |
| 17. | BILT Tree Tech Ltd |
| 18. | C. P. Aquaculture India Ltd., Chennai, Thailand based Co. |
| 19. | Camson Bio Technologies |
| 20. | Cauvery Palmoil Ltd |
| 21. | CCCL Ltd. |
| 22. | Ceasefire Company, Chennai |
| 23. | Chinmaya International School Coimbutore, Tamilnadu |
| 24. | Cholamandalam MS General Insurance |
| 25. | Connetz consultants |
| 26. | Coromandel Fertilizer Ltd |
| 27. | Dalmia Cements |
| 28. | Delphi TVS Ltd., Chennai |
| 29. | Deutsche Babcock Al Jaber WLL Qatar, UAE |
| 30. | Dharani Sugars Limited & M/s Rural Innovation, Chennai |
| 31. | Dreams Private Limited, Chennai |
| 32. | DSM Soft (P) Ltd, Trichy |
| 33. | EID Parry India Ltd., |
| 34. | Emami Cosmetics Ltd. |
| 35. | Empee Sugars and Chemicals Ltd., |
| 36. | ESSAR, Gujarat |
| 37. | Essea Tharaga |
| 38. | ETA Engineering Pvt Ltd |
| 39. | Eureka Forbes Limited, Chennai |
| 40. | Eversendai Engineering Qatar |
| 41. | Excel Industrial Corps, Tirupur |
| 42. | Feedback Business Consulting Services Pvt. Ltd., |
| 43. | Fervent Life Sciences, Bombay |
| 44. | FLEXTRONIC Technologies India Private Limited, Chennai |
| 45. | Fortis Malar Hospital |
| 46. | Foxconn, China |
| 47. | Franco-Indian Pharmaceuticals Pvt. Ltd. |
| 48. | GAEA Global Technology |

| S. No. | Name of the Company |
|--------|---|
| 49. | Geojith Financial Services Limited |
| 50. | Gland Pharma, Hyderabad |
| 51. | Global Green Company |
| 52. | Godrej Agrovvet Company Ltd. |
| 53. | Gold Coin, American based Company, Chennai |
| 54. | Grobtest Feeds Corporation India Ltd., Chennai |
| 55. | Hatcheries |
| 56. | HCL Ltd., Chennai |
| 57. | HDFC Bank |
| 58. | Hexaware Technologies, Ltd., |
| 59. | Honeywell, Madurai |
| 50. | Huawei Company |
| 61. | I Gate Global Solutions Blr. |
| 62. | ICICI Bank |
| 63. | Idegene Life Science, Pharmacy |
| 64. | IL & FS |
| 65. | India Infoline ltd., Chennai |
| 66. | Integrated Pest Control Ltd |
| 67. | Interface Communication Limited |
| 68. | Inve, Chennai, German based Company |
| 69. | ITC Pvt. Ltd., Guntur |
| 70. | Jatropower Bio Trading Pvt., Ltd., |
| 71. | Karvi |
| 72. | Kaynes Technologies |
| 73. | KEC International Ltd, Mumbai |
| 74. | Kemin, Chennai, American based Company |
| 75. | Kothari Sugars and Chemicals Ltd., |
| 76. | L & T INFOTECH, Mumbai |
| 77. | L & T - ECC, Chennai |
| 78. | Lark Innovative, Chennai |
| 79. | Maha Bharathi College of Engineering |
| 80. | Marine Technologies, Chennai, Taiwan based Company |
| 81. | Maveric Systems Chennai |
| 82. | Max Network Life Insurance Limited |
| 83. | Mentoris Solutions Private Ltd., |
| 84. | Merck Pharma |
| 85. | Metrohm industries, Chennai |
| 86. | Microlab , Hosur |
| 87. | Multiplex Biotech Pvt, Ltd |
| 88. | Muthu Pharmacy |
| 89. | Nagarjuna International Ltd |
| 90. | Nationalized Banks |
| 91. | Newgen Software Technologies, New Delhi |
| 92. | NGO |
| 93. | NIIT Ltd., Chennai |
| 94. | NOCL, Cuddalore |
| 95. | Nonan hadisk |
| 96. | Only Success Multinational Training Organization, Chennai |
| 97. | Orchid Chemicals & Pharmaceuticals Ltd., |
| 98. | Piramal Health Care's |
| 99. | Posidion Aquatics, Chennai |

| S. No. | Name of the Company |
|--------|--|
| 100. | Priya Aqua farms, Ongole, A.P. |
| 101. | Pro Handicam Chennai |
| 102. | PS Consultancy, Pondicherry |
| 103. | Pushpam flora Base Pvt, Ltd |
| 104. | Rajeshree sugars and Chemicals Ltd., |
| 105. | Rallis India Ltd. |
| 106. | Rasi Seeds Private Ltd. |
| 107. | Repc Bank |
| 108. | Ritemed Pharma Retail P.Ltd., Chennai (D.Pharm) |
| 109. | Rotary Engineering (Singapore) |
| 110. | S.V. Sugars & Dhan Foundation |
| 111. | Sacred Heart College, Tirupattur, Vellore District |
| 112. | Sadhana Agrotech Consultancy, Bangalore |
| 113. | Sahsun Industries, Chennai |
| 114. | Sakthi Sugars |
| 115. | Sanmar Engineering Groups |
| 116. | Saravana Farm Service |
| 117. | Sathyam Computers, Hyderabad |
| 118. | Savvy Soft Technologies |
| 119. | Seafood Industry |
| 120. | Seed Industry |
| 121. | Shriram EPC |
| 122. | Sixsigma Softsolutions Pvt. Ltd., |
| 123. | Southerland |
| 124. | SRM University Chennai, Tamil Nadu |
| 125. | Standard Chartered Bank |
| 126. | State Bank of India |
| 127. | State Bank of Travancore |
| 128. | Sterlite Industries Ltd, Vedanta Groups |
| 129. | Sundaram Direct |
| 130. | Sundaram Fastners Ltd |
| 131. | Sutherland and Global Ltd Chennai |
| 132. | Tablets India, Chennai |
| 133. | Tamil Nadu Petroproducts Ltd Chennai |
| 134. | Technobees Corporation |
| 135. | Technomind |
| 136. | The Imperial, Tirupur |
| 137. | The Water base Ltd., Chennai |
| 138. | Thiru Arooran Sugars |
| 139. | TNCDA Ltd., Chennai |
| 140. | TNO Books and Journals Pvt. Ltd |
| 141. | TVS Sundaram Finance Limited Chennai |
| 142. | UTI Bank |
| 143. | Vedanta-Sterlite, Tuticorin |
| 144. | Vidya Vigas Matriculation School Namakkal, Salem Dt., Tamilnadu. |
| 145. | Virtual Solutions |
| 146. | Visen Chemicals, Mumbai |
| 147. | Visen Industries, Gujarath |
| 148. | Wipro Computers Limited, Bangalore |
| 149. | Wockhardt India Pvt. Ltd., Mumbai |

5.1.13 Does the university have a registered Alumni Association? If yes, what are its activities and contributions to the development of the university?

Yes, the University has alumni associations pertaining to constituent faculties or departments. The associations like Faculty of Engineering and Technology (FEAT) Alumni Association and Annamalai Agricultural Alumni Association are registered associations.

In the Faculties of Arts and Science, the Alumni Associations function to promote a close network for bridging the gap between budding executives and the proficient alumni.

The registered alumni associations of Engineering and Agriculture Faculties contribute to the development of the university in the following manner

- Conducting job mela
- Conducting mass training camps for career guidance
- Conducting group discussions
- Giving special lectures
- Assisting in industrial visits
- Motivating students by giving prizes to the rank holders.
- Donating books to the library, creating endowments.
- Establishing guest houses in the university campus and in Chennai for the benefit of all alumni.
- Bringing out an annual newsletter.
- Conduct of annual general body meeting and reunion meets of different batch of students.
- Creating endowments in honour of retired faculty members

5.1.14 Does the university have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?

Students grievances are redressed by various students welfare committees such as

1. Women Welfare Committee
2. Anti Ragging Committee
3. Students Counseling cell
4. Students welfare & Health care committee
5. Student Council, etc

All these committees report the grievances to appropriate authorities and sort out the problems. Further, students submit their grievances in the students suggestion box installed in front of the Dean's Office. An official forum comprising co-ordinators, wardens and HODs go through these grievances once a month. At the department level, Grievances are also addressed to the respective class counsellors who will seek to redress these grievances through the HOD.

Grievances with specific reference to accommodation shortfalls, lacunae in student amenities such as waiting halls, canteen, constitution of research advisory committee etc. are attended to with the direction of the committee.

A Students' Grievances Redressal Cell was formed to redress the grievances of students and to attend to the complaints received from the students. An SMS based Grievances Redressal System was launched on 30.08.2013. Students have been informed by erecting banners / flex boards in the university that any grievances / complaints related to academics, hostels, incidents of ragging, etc. may be immediately brought to the notice of the Administrator through SMS. Two dedicated mobile numbers (9486922780 / 9600488999) have been earmarked for the purpose.

5.1.15 Does the university promote a gender-sensitive environment by (i) conducting gender related programmes (ii) establishing a cell and mechanism to deal with issues related to sexual harassment? Give details.

Gender Related courses

The following courses related to women and gender studies are offered in the Faculty of Arts:

Department of Sociology

1. Women in Society
2. Gender and Society
3. Women and Child Welfare

Department of Economics

1. Theories of Gender
2. Gender and Economics
3. Gender and Development
4. Women in Indian Economy

Department of Population Studies

1. Women and Development
2. Reproductive and Child Health
3. Gender Equity and Women Empowerment.

A proposal for establishing a Center for Women's Studies has been submitted for the 12th Plan Grant by the Faculty of Arts.

Mechanism to deal with issues related to Sexual Harassment

"Prevention of Sexual Harassment & Grievance Redressal Committee" has been constituted in every Faculty of the University that functions to both prevent and exercise remedial action against sexual harassment. Both the teaching as well as non-teaching staff have been sensitized with respect to gender related issues during meetings by the Administrator. Awareness has been created about the Visakha Guidelines issued by the Supreme Court of India and the UGC guidelines and suitable mechanism is in place to deal with any complaints. The remedial measures include counselling, enquiry, and disciplinary action when found necessary.

In response to the call from the Higher Education Department, Govt. of Tamil Nadu, letter No. 277/J2/2013-1, dt. 08.01.2013, the Faculty of Engineering and Technology in the University has set up a Committee of Students Counseling Cell with representative women faculty from each department to ensure security for women in the campus. The first meeting of this cell was held on 04.03.2013 at 4.30 p.m. in the Faculty of Engineering and Technology. This will eventually be initiated in all departments of study in the University.

5.1.16 Is there an anti-ragging committee? How many instances, if any, have been reported during the last four years and what action has been taken in these cases?

The following measures have been undertaken to prevent the menace of ragging: Formation of Monitoring Committee for Anti-Ragging in every faculty and department.

- i) Circulars have been issued to the students highlighting the implications of and punishment for ragging.
- ii) Anti-Ragging posters displayed through Flex Boards in all vantage points including main avenues of the University, Lecture Halls, Hostels and in Department Notice Boards.
- iii) Joint declaration obtained from students and parents against indulging in ragging.
- iv) Frequent visits by faculty members, Wardens in the Hostels etc.
- v) Surprise Inspections by Professors, Wardens, Officials in the Hostels, etc.

No serious ragging instances have been reported during the last four years because of the strict monitoring by the anti-ragging committee.

5.1.17 How does the university elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The views and suggestions of various stakeholders that emanate during the students industrial visits, Parents Teachers meeting etc. are considered for the development of students. Stakeholders like experienced industrial executives, well placed alumni, and progressive farmers are included in the Board of studies and Faculty for contribution of vital inputs in designing the curriculum.

Stake holders and alumni are also invited for contribution of endowment funds that offer scope for special lecture, prizes etc. They are also offered a platform for campus recruitment. Distinguished stake holders are also invited as chief guests for annual day, sports day celebrations, inaugural and valedictory functions of conferences, etc. to offer their valuable advice to students.

5.1.18 How does the university ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

The university ensures and provides adequate funds to support the women's student activities. International Women's day is celebrated by conducting competitions and by inviting distinguished women to deliver inspiring lectures.

Women are encouraged to participate in all sports and cultural activities. They are given special attention and consideration, with the motivational support of women faculty members. During 2011-12, out of four of the Agriculture Association office bearers, three were women. The women sports are organized in the university sports pavilion every year and women teams are encouraged to participate at interuniversity level, state level and district level sports competitions. A separate fitness centre is established exclusively for women students. The fruitful outcome of these efforts are evident from the following laurels achieved by the university womens team.

- kho-kho- 2010 winner in the All India Inter University competition
- Football- 2011 Runners-up in the All India Inter University competition
- Cricket- 2011 South Zone third place.

5.2 Student Progression

5.2.1 What is the student strength of the university for the current academic year?

Analyse the Programme-wise data and provide the trends for the last four years.

| Student Progression | Arts | Science | Marine Sciences | Indian Languages | Engg. & Tech. | Education | Fine Arts | Agriculture |
|---------------------------------|------|---------|-----------------|------------------|---------------|-----------|-----------|-------------|
| UG to PG* | - | - | - | - | 38 | 65 | 35 | 35.05 |
| PG to M.Phil.* | 33 | 25 | 20 | 40.66 | - | 53 | 60 | - |
| PG to Ph.D. | 19 | 20.05 | 30 | 35.61 | 16.55 | 38.33 | 20 | 17.05 |
| Ph.D. to Post-Doctoral | 0.5 | 1.25 | 5 | 1.66 | 0.77 | - | - | - |
| Employed | | | | | | | | |
| • Campus selection | 15 | 28.8 | 30 | - | 15 | 43.33 | - | 12.95 |
| • Other than campus recruitment | 83 | 34.75 | 50 | - | 43.33 | 45.86 | 87 | 69.35 |

5.2.2 What is the programme-wise completion rate during the time span stipulated by the university?

| Completed programme | Percentage of students completed within the time frame | | | | | | | | |
|---------------------|--|---------|-----------------|------------------|---------------|-----------|-------------|----------|-----------|
| | Arts | Science | Marine Sciences | Indian Languages | Engg. & Tech. | Education | Agriculture | Medicine | Dentistry |
| UG | 99 | - | - | - | 100 | 92 | 95 | 100 | 100 |
| PG | 98 | 90 | 97 | 100 | 90 | 96 | 100 | 100 | 100 |
| M.Phil. | 100 | 95 | 98 | 100 | - | 85 | - | - | - |
| Ph.D, | 80 | 90 | 85 | 95 | - | 60 | 40 | - | - |
| PG Diploma | 90 | - | - | 100 | - | - | - | - | - |

5.2.3 What is the number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, GATE / CAT / GRE / TOEFL / GMAT / Central / State services, Defense, Civil Services, etc.?

The following number of students qualified in competitive examinations:

| GATE | UGC-NET/SLET | TOEFL | GRE | GPAT | TRB | ICAR ARS NET | Central & State Services |
|------|--------------|-------|-----|------|-----|--------------|--------------------------|
| 66 | 80 | 248 | 157 | 60 | 102 | 32 | 32 |

5.2.4 Provide details category-wise regarding the number of Ph.D/D.Litt./D.Sc. theses submitted/ accepted/ resubmitted/ rejected in the last four years.

| S. No. | Faculty | Ph.D. | | | | D.Sc. | | D.Litt. | |
|--------|------------------|-----------|----------|--------------|----------|-----------|----------|-----------|----------|
| | | Submitted | Accepted | Re submitted | Rejected | Submitted | Accepted | Submitted | Accepted |
| 1. | Arts | 261 | 261 | - | - | - | - | - | - |
| 2. | Science | 276 | 276 | - | - | - | - | - | - |
| 3. | Marine Sciences | 80 | 66 | - | - | - | - | - | - |
| 4. | Indian Languages | 70 | 70 | - | - | - | - | - | - |
| 5. | Engg. & Tech. | 216 | 195 | - | - | - | - | - | - |
| 6. | Education | 117 | 104 | - | - | - | - | - | - |
| 7. | Fine Arts | 4 | 3 | - | - | - | - | - | - |
| 8. | Agriculture | 68 | 68 | - | - | 1 | 1 | - | - |

5.3 Student Participation and Activities

5.3.1 List the range of sports, cultural and extracurricular activities available to students. Furnish the programme calendar and provide details of students' participation.

Range of Sports Activities

The following are the various sports and games events organised in the university with the help of the department of Physical education and sports sciences.

Intramural, Interhouse, Interfaculty, Annual Track & Field Meet, Dental Sports, Medical Sports, Mechanical Engineering Association's Sports, Helix, Agriculture Sports, State Level Inter Physical Education Tournament, State level open tournament, South zone and All India inter university competitions. These sports and games events are organised separately for all men and women teams.

Cultural and Extracurricular Activities

The associations in various faculties are active and encourage the students to participate in literary, sports and cultural events conducted every year. The students actively participate in various intradepartmental and intramural competitions as well as in

regional and state level competitions. The cultural committees, in all faculties headed by the adviser and assisted by a team of staff members, conduct the literary and cultural events like debate, quiz, essay writing, song and dance events, instrumental music, skits, etc., for the students, every year.

5.3.2 Give details of the achievements of students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National /International, etc. during the last four years.

Achievements in Co-curricular Activities:

NCC cadets have won prizes in different National Integration Programmes organised in different places. NCC cadets including girl cadets have got through several stages of selection and progressed up to *participation in Annual Republic Day parades in National capital three times during last four years.*

Participation in concerts conducted by Tamil Isai Sangam – Chennai & Madurai and other sabhas every year.

Achievements in Cultural and Literary Activities:

University students have won prizes consecutively in Youth Parliament and the students along with their coaches have been invited to New Delhi to receive prizes. 25 Students of B.Sc. Ag. / B.Sc. Hort. Participated in State Level Inter Collegiate Cultural Competition (TALENTIA) organised by ACRI, Madurai during 2007-2008. They secured many prizes in Singing, Shipwreck, Drawing and Group Dance. In 2008-2009 – 30 students participated and got prizes in Origami, Vegetable Carving, Group Dance, Fashion Parade. In 2010-2011 – 15 students participated and got two prizes.

Achievements in Sports:

2011-12

| Game | Zone | Positions won |
|----------------------|------------|---------------|
| Ballbadminton – Men | All India | Winner |
| Football – Women | All India | Runner Up |
| Kabaddi – Men | All India | III |
| Weight Lifting – Men | All India | Gold Medal |
| Power Lifting – Men | All India | Gold Medal |
| Football – Women | South Zone | Winner |
| Kho-Kho – Men | All India | VI Place |
| Hockey – Men | South Zone | Runner Up |
| Kho-Kho – Men | South Zone | Runner Up |

| Game | Zone | Positions won |
|----------------|------------|---------------|
| Cricket - Men | South Zone | III |
| Kabaddi - Men | South Zone | IV |
| Football - Men | South Zone | IV |
| Tennis - Men | South Zone | IV |

2010-11

| Game | Zone | Position |
|------------------|------------|-----------|
| Basketball - Men | All India | Winner |
| Kho-Kho - Women | All India | III |
| Basketball - Men | South Zone | Runner Up |
| Tennis - Men | South Zone | III |
| Kho-Kho - Women | South Zone | IV |

2009-10

| Game | Zone | Position |
|------------------|------------|-----------|
| Kabaddi Men | South Zone | Runner Up |
| Hockey Men | South Zone | III |
| Basketball - Men | South Zone | III |

2008-09

| Game | Zone | Position |
|----------------|--------------------|-----------------------------|
| Hockey - Men | South Zone | Winner |
| Football - Men | South Zone | Winner |
| Athletics | Junior - All India | Pole vault (M) - Gold Medal |
| Athletics | All India | 4 x 100 Relay (M) - Bronze |
| Athletics | All India | 4 x 400 Relay (M) - Bronze |
| Kabaddi - Men | South Zone | III |

2007-08

| Game | Zone | Position |
|---|------------|----------------------------------|
| Football - Men | South Zone | Winner |
| Football - Men | All India | Winner |
| Kabaddi - M | South Zone | Winner |
| Hockey - M | South Zone | IV |
| Athletics | All India | Long Jump (M) - Bronze Medal |
| Athletics | All India | Javelin Throw (W) - Bronze Medal |
| Athletics | All India | 110 m Hurdles (M) - IV Place |
| Athletics | All India | Pole Vault (M) - IV Place |
| Tamilnadu and Puducherry State Inter Physical Education Tournaments | | Overall Champions |

5.3.3 Does the university have a mechanism to gather data and feedback from its graduates and employers and use them for the growth and development of the institution?

Yes, the feedback is obtained from the graduates and employers frequently, especially during Annual General Body Meeting or Annamalai University Alumni Associations. The feedback received is used for improvement in curriculum development and syllabus modification. This also helps to ensure quality of teaching, research and extension activities.

5.3.4 Does the university conduct special drives / campaigns for its faculty and students to promote heritage consciousness?

Yes, the university conducts special drives and campaigns for its faculty and students to promote heritage consciousness through the NSS units. Special camps in heritage sites like temples famous for architecture viz., Tanjore, Madurai, Chidambaram, Rameswaram and Mamallapuram are organised. Faculty and students are also exposed to dance and cultural heritage through their participation and assistance in 'Natyanjali' festival.

5.3.5 How does the university involve and encourage its students to publish materials like catalogues, wall magazines, college magazine, and other material? List the major publications/ materials brought out by the students during the last four academic sessions.

The university involves and encourages the students to publish materials like catalogues, wall magazines, college magazine and other materials to showcase students' literary activities. There are a large number of literary contests held in the University by the different departments where students get an opportunity to participate. Examples of students magazines include REVERB and Grains of Gold and Silver. Students of Nursing prepare posters, charts, models, banners, handouts, pamphlets, brochures, video records, puppet show and psycho drama. To create awareness among the patients and the general public students conduct mass education programmes, psychodrama and organize exhibition using effective audiovisual aids. Following are some of the awareness programmes conducted by students:

| Year | Title |
|------|--|
| 2008 | Prevention and management of DM |
| | Stress management for school children |
| 2009 | Selected nasocomical infection |
| | Ill effects of alcoholism |
| | Diet to be taken during lactation |
| | Breast feeding for mothers who have undergone Cesarean section |
| | Preparing premenopausal the women to manage common complaints |

| | |
|--|---|
| 2010 | Smoking Cessation |
| | HIV/ AIDS |
| | A module regarding coping strategies for infertile women |
| | The common complaints of menopause and their home management |
| | Health concern during old age |
| 2011 | Care of ventilated children |
| | Healthy lifestyle for women |
| | Management of minor disorders of pregnancy |
| | Module on healthy ways of coping during peripartum period |
| | Knowledge and attitude regarding vasectomy among the eligible fathers |
| | Tips for postoperative recovery to women after LSCS |
| | Swine flu |
| | Nursing leadership skills |
| | Stress reduction management |
| | Care of children undergoing catheterization |
| Home care management of mentally and physiologically challenged children | |
| 2012 | Safe motherhood |
| | Prevention of preeclampsia |
| | Prevention of uterine prolapse among women during reproductive age group |
| | Coping measures to reduce stress among husbands of women diagnosed of breast cancer |
| | Tips for happy and healthy way of coping for perimenopausal women |
| | Self esteem and academic achievement |
| | Parenting practice and behavioural pattern |

5.3.6 Does the university have a Student Council or any other similar body? Give details on its constitution, activities and funding.

Yes, each faculty has an association wherein students are nominated based on their merit and interest as General Secretary, Placement Secretary, Sports Secretary, Literary Secretary, Cultural Secretary and Joint Secretaries from various years of study. They are ably guided by teaching faculty. They look after various extracurricular and co-curricular activities. These societies are funded by students' contribution as well as assistance from the University. Besides these, informal societies comprising students and staff meet every week and lectures by students on different topics are also organised.

5.3.7 Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.

The representatives in Class and Hostel are engaged in academic and administrative activities concerned as and when required. In each faculty, there is an association wherein students are nominated based on their merit and interest as General Secretary, Placement Secretary, Sports Secretary, Literary Secretary, Cultural Secretary and Joint Secretaries.

Any other information regarding Student Support and Progression which the university would like to include.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and the mission of the university.

The university's vision and mission is to empower the student community through value-based higher education. The university is devoted to promoting education in all branches of learning and sustaining an intellectual culture which cultivates in students a holistic personality. The motto of the university, *with courage and faith* underlies all our endeavours.

6.1.2 Does the mission statement define the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future, etc.?

The University was established with the mission of enriching and promoting Tamil Language and Tamil Music in 1929, a mission that was holistically accomplished through doyens who brought glory to the University. Having fulfilled the fundamental objectives, the University has evolved over the decades into a multidisciplinary, multifaceted institution in sync with the needs of society and national development. Today, Annamalai University has all the disciplines of higher learning under one roof. The University still maintains its residential character with more than thirty thousand students pursuing on-campus programmes and over one lakh students enrolling for various off-campus programmes (through distance education mode) each year. The University continues to serve the socially and economically disadvantaged strata of society, and many of the alumni who were first generation literates are highly placed which is a testimony to its service to the nation in creating an egalitarian society. The University has in the last few years become a melting pot of different cultures with students from Kashmir to Kanyakumari and also from other countries enrolling in different programmes of study. Apart from imparting quality education, the University has displayed tremendous social responsibility by extension activities that have made a significant impact on the socio-economic status of the surrounding villages.

The University has a dynamic and vibrant research focus that is reflected by publications, awards, wide spectrum of global collaborations, Scopus rating, and generous funding from national and international agencies.

6.1.3 How is the leadership involved

* In ensuring the organization's management system development, implementation and continuous improvement?

The Vice-Chancellor is the Head of the Institution. He is assisted by the Registrar, Controller of Examinations, and Deans of all the ten different Faculties in all academic and administrative matters. The Syndicate and the Academic Council are the two supreme

bodies. As the chairperson of these bodies, the Vice-Chancellor ensures the smooth functioning of the university in the development of management system, implementation of policies framed and for continuous improvement. The Board of Studies and the Faculty headed respectively by the Head of the Department and the Dean are the other bodies where all important academic decisions that fall under their purview are made. After a thorough review, they get the approval in the Academic Council and the final approval is accorded at the Syndicate. At the department level, the Head plays a leadership role in both academic and administrative matters. As Chairperson of the Board of Studies and Board of Examinations, the Head of the department plays a leadership role in curriculum development and evaluation. This process ensures involvement of leadership at all levels, as per the statutory provisions of the university.

*** In interacting with its stakeholders?**

The University leadership interacts with all the stakeholders, viz. the students, parents, alumni, faculty, support staff, industry, and the community.

Interaction with the students initiated from the time of admission continues up to placement and even after they leave the University and become cherished alumni. The Commencement Day and department orientation programme initiate the interaction. The Mentor-Mentee system and the co-curricular and extracurricular activities create a sense of belonging in the student community. In addition, all the faculty and Head of the department are easily approachable by the students. All the students, faculty and non-teaching staff can meet with the Administrator every day at fixed time slots to discuss any academic matters or for grievance redressal. The management interacts with the parents during admission and whenever the parents seek an audience. The University fosters a strong interaction with the Industry by including industrialists in the Boards of Studies, organizing Academy-Industry Meets, and campus placements and undertaking consultancy projects. The University has over the years rendered yeomen service to the community through its multifarious extension activities as described in Criterion-III.

*** In reinforcing a culture of excellence?**

In-service training programmes in pedagogy, communication skills and research methodology have been successful in motivating incumbent teachers. The Annual Research Methodology Workshops which focus on various aspects of research including research design and execution, good laboratory practices, techniques, mechanics of scientific writing, stress and time management, and research ethics have reinforced research culture. The Internal Quality Assurance Cell functions as the nodal centre for evolving strategies and programmes to reinforce a culture of excellence in teaching and research.

*** In identifying organizational needs and striving to fulfill them?**

The department-wise review meetings of all teaching and non-teaching staff with the Administrator has provided scope for stock taking, introspection, and served to strengthen the functioning of the departments of study in various dimensions. In these

meetings, the needs of the individual departments with respect to infrastructural facilities, budgetary requirements, financial assistance to students, and methods to hasten the procedures for research activities are discussed. A timeframe is set for milestones and deliverables that is strictly adhered to.

6.1.4 Were any of the top leadership positions of the university vacant for more than a year? If so, state the reasons.

No

6.1.5 Does the university ensure that all positions in its various statutory bodies are filled and meetings conducted regularly?

The statutory bodies of the university and their frequency of meetings conducted are given below:

| | | |
|----------------------|---|--|
| The Syndicate | - | Once in a Month |
| The Academic Council | - | Twice in an academic year |
| The Dean's Committee | - | Once in a month (12 meetings are held in an Academic year) |
| The Faculty | - | Meets once in a year |
| The Board of Studies | - | Meets compulsorily once in an academic year. Sometimes to take major academic decisions meets twice in a year. |

6.1.6 Does the university promote a culture of participative management? If yes, indicate the levels of participative management.

Yes, a culture of participatory management is practiced at all levels. At the department level, suggestions from all the faculty are taken into account for curriculum design and development, teaching-learning, and evaluation process as well as in general administration. Student representatives play a role in managing the departmental societies. At the Faculty level, representatives from different departments of study as well as external members play a proactive role in the curricular aspects. Further, faculty members managing several auxiliary units such as library, laboratories, and hostels collectively participate in administration and decision making. Constitution of committees for exam reforms, projects and consultancies, hospital, purchase, security, anti-ragging, sexual harassment, hygiene and sanitation has led to greater participatory management and decentralization.

6.1.7 Give details of the academic and administrative leadership provided by the university to its affiliated colleges and the support and encouragement given to them to become autonomous?

Not applicable

6.1.8 Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

Not applicable

6.1.9 How does the university groom leadership at various levels? Give details.

The University actively encourages the participation of all stakeholders by creating an intellectual ambience that is essentially democratic. All academic decisions are taken after deliberation at the department, faculty, and university levels providing the opportunity for younger members to articulate their viewpoint. This bottom-up approach grooms both students and staff members to take up leadership roles.

At students level

Every batch of students has a student representative. Student Secretaries are nominated as office bearers of department associations. In addition, students function as Underofficers for NCC and team leaders for various NSS units.

At faculty level

The faculty members are deputed to attend training programmes for developing leadership qualities. At the department level, staff members are entrusted with the responsibility of an office such as Controller of Sessional Examinations, Stores, Library, or Convenor of departmental societies thereby honing their leadership potential. The constitution of committees in the university has resulted in grooming faculty for leadership role besides achieving the goal of shared responsibility. Many staff members organize national and international conferences and workshops. Faculty members are entrusted with different leadership positions like Warden, Deputy Warden, NSS/NCC Officers, Placement cell officers, members of student grievances cell, office bearers of Research society, etc. to groom leadership at various levels.

6.1.10 Has the university evolved a knowledge management strategy? If yes, give details.

Yes, endowment lecturers, refresher courses, national and international training workshops and faculty development programs are organized by the University periodically. Faculty members are also permitted to participate in academic development programmes organized by other institutions within India and abroad. The university also collaborates with international research organisations, universities, NGOs, industries, and stakeholders to collect and pool priority needs and advancement for incorporation to students through curriculum. The research dissertations are collectively maintained by the university library and are made available in the LAN connectivity. Practical manuals, text-books and other reading materials prepared and published by the teaching staff are numbered in the library. Lead lectures delivered by

invited experts are also printed and maintained as repository. Teaching faculty are offered support and encouragement by the University in operating research projects, offering consultancies, and publishing articles that primarily contribute to management of knowledge for social causes. Whenever new equipment is purchased, an operational demonstration is organized with prior intimation to all stakeholders. Training programs are held whenever a new facility is introduced in the library or Computer Centre.

6.1.11 How are the following values reflected in the functioning of the university?

*** Contributing to national development**

- The University equips students with the required knowledgebase and skills thereby empowering them to serve the nation.
- The faculty in addition to inspiring young minds also contribute to their field of specialization by undertaking sponsored projects and consultancies on socially relevant themes.
- The social responsibility of the University is amply evidenced by its commitment to extension activities through NCC/ NSS/YRC, Center for Rural Development, Community Medicine, Nursing, and Agriculture. Through these organizations the following activities have been organized that contribute to national development: AIDS awareness programmes, blood donation camps, health camps, mass literacy campaign, improved farming systems, skill development in rural youth, technology transfer from lab to land to improve the livelihood of rural poor with the support of NABARD, training programs on agrarian issues, and other socially relevant activities.

*** Fostering global competencies among students**

- The curriculum is constantly updated to keep abreast of latest developments in the field and meet global standards. The core competencies of the students in both theoretical and practical aspects are harnessed.
- Students are imparted training to become computer and techno savvy. Significant e-learning resources are made available for acquisition of knowledge and competencies to face international challenges.
- Students are offered opportunities for international educational experience such as dual degree programme with Dalhousie University, Canada, and academic credit transfer with Tennessee Technological University, Tennessee, USA.
- Students are encouraged to participate and present papers in seminars and conferences, and undertake winter and summer research projects in reputed institutions in India and abroad.
- Collaboration with research institutions and industries and bilateral exchange programmes

- Making two publications mandatory for submission of Ph.D. thesis has resulted in significant research output.
- Soft skill development programmes enhance confidence levels
- Students are encouraged and supported to appear for global competitive examinations like TOEFL, GRE, GMAT, IELTS, etc.

* **Inculcating a sound value system among students**

- Introduction of a core course on ‘Professional Ethics’ in most of the professional programs.
- Research scholars are taught Research Ethics as part of their coursework
- Yoga classes are conducted for students to inculcate a sound value system
- Participation in NSS/NCC/YRC inculcates social responsibility.
- Community oriented programmes in the curriculum are made mandatory.

* **Promoting use of technology**

- Provision of LCD projectors in departments to facilitate ICT-enabled teaching-learning resources.
- Establishment of multimedia laboratories
- Training programs are organized in the use of sophisticated equipment.
- Access to computers, internet and technical software for students. Short-term training programmes on use of e-resources.
- ICT deployed library with OPAC system is available for use by students.
- E-governance: information on admissions, details of programmes, attendance, conferences, and faculty-wise details are uploaded on the University website.
- Use of OMR sheets for data entry has minimized error probability and hastened the process of evaluation.

* **Quest for excellence**

- Syllabi designed to contain state-of-the-art developments in the subject.
- Screening of research proposals before submission to funding agencies.
- Publication of papers in journals with high impact factor
- Filing of patent applications
- Research collaborations and MoUs with prestigious national and international universities/institutions and industries such as Karolinska Institute and Stockholm University Sweden, Tennessee Tech University, Johns Hopkins University, University of Connecticut, Food and Agriculture Organisation, Rome, International Rice Research Institute, Philippines, United States Department of Agriculture, USA.

6.2 Strategy Development and Deployment

6.2.1 Does the university have a perspective plan for development? If yes, what aspects are considered in the development of policies and strategies?

* Vision and mission

The university has a perspective plan for development which is in line with the vision and mission for which it was established and UGC is aiming for, that is to increase Gross Enrolment Ratio (GER), through on-campus and DDE programmes. The perspective plan of the university is to fix development targets that include **enhancing GER, providing equity in access to education** while ensuring **quality of education**. The University envisages creation of Schools of learning and more rational inclusion of different disciplines within these schools.

* Teaching and learning

As outlined by the UGC, the perspective plan of the university is to put in place reforms in teaching, learning, and evaluation. These include a cafeteria approach to education, introduction of lateral exit for 5-year integrated programmes, dual degrees, improved technology-assisted participatory teaching-learning processes, modular teaching, and greater emphasis on student feedback. Several examination reforms have been planned including scope for reevaluation of answer scripts, preparation of question banks, and online examination and evaluation.

* Research and development

The university plans to create facilities for research with modern cutting-edge technology to provide international quality infrastructure and resource support to researchers in all the disciplines. Constitution of various Ethics Committees including Biosafety, Psychology Ethics Committee, Humanities and Social Sciences Ethics Committee, and Technology Ethics Committee, undertake Interdisciplinary Research to a greater extent, enter into MoUs for joint Ph.D. supervision with renowned universities abroad, online tracking of Ph.D. evaluation status, filing of international patents, and publication in high impact factor journals are some of the plans on the anvil.

* Community engagement

- Initiate academic programs for the local community such as music and literature appreciation, technological advancements, and perspectives on health and economic issues.
- Organization of local communities into producer / consumer forums based on their skill, resource and needs.
- Consultancy and offering platform for business incubation.

* **Human resource planning and development**

- Capacity building and enhancement of core competencies among students and faculty
- Development of Institutional management programmes for all levels of staff
- E-governance to be made a matter of routine

* **Industry interaction**

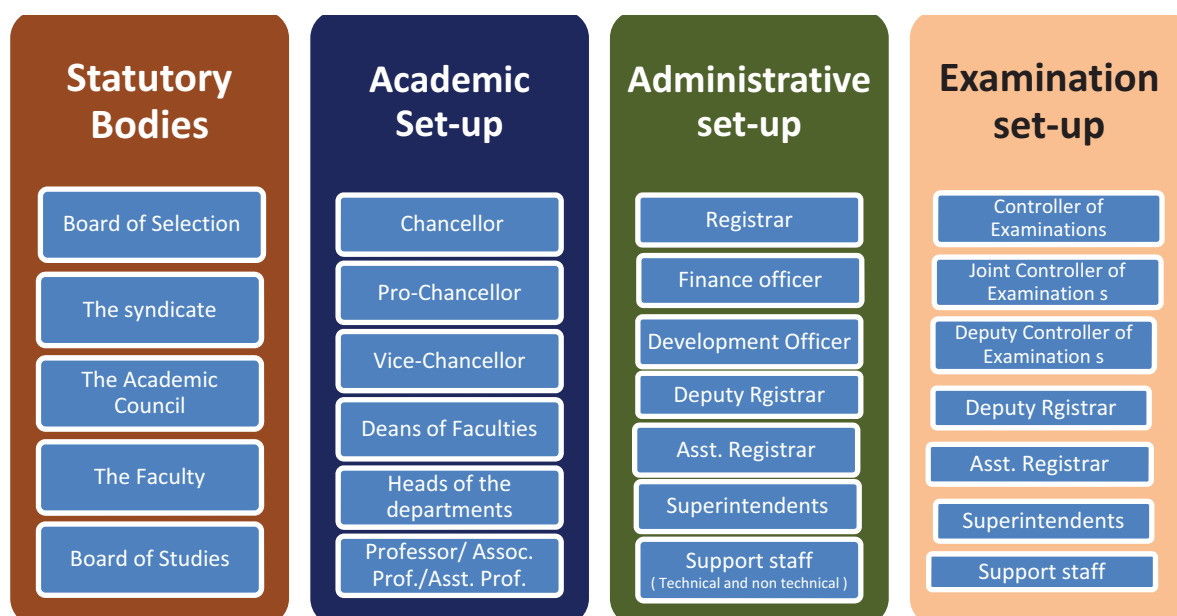
It is planned to establish more Industrial Cells in addition to the existing one in the Faculty of Engineering & Technology to augment the collaborations with Industries / Institutions, to foster inter-institutional collaboration at regional, national and international levels for research, training and development in select areas. In curriculum designing major thrust is to be given to the employment avenues by arranging periodical industrial visits and campus interviews through placement cell/ industry cell and to have sandwich courses with the involvement of reputed industries.

* **Internationalisation**

- Facilitate academic credit transfer with universities abroad.
- Enroll for online programs with international institutes
- Enter into MoUs for teaching-learning and research and bilateral exchange programs
- Run blogs in various subjects.

6.2.2 Describe the university's internal organizational structure and decision making processes and their effectiveness.

The internal organizational structure and statutory bodies of the university is illustrated below.



The Vice-Chancellor is the Head of the institution. He is assisted by the Registrar, Controller of Examinations and Deans of all ten faculties in all academic and administrative matters. The Syndicate and the Academic Council are the supreme bodies. The Vice-Chancellor is the chairman of these bodies. The members of these councils express their views and suggestions for the smooth functioning of the university in the periodic meetings. The Board of Studies, the Deans' Council and the Faculty are the other bodies where all important academic decisions that fall under their purview are made. After a thorough review, they get the approval in the Academic Council and then the approval is accorded at the Syndicate. This process ensures democratic academic decisions at all levels, as per the statutory provisions of the University.

The administrative machinery is well knit and there is adequate decentralization of various functions, vested with the Deputy Registrars, Assistant Registrars, Superintendents, etc. The examination wing is headed by the Controller of Examinations assisted by the Joint Controller and Deputy Controller of Examinations and the support staff. All the administrative functions come under the overall control of the Registrar. Both the academic and administrative activities are under the purview of the Vice-Chancellor. Both the top-down and bottom-up approaches are used to effectively implement policies.

6.2.3 Does the university have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

The University has an Internal Quality Assurance Cell (IQAC) that plays a proactive role in reviewing the current status and evolves programmes, policies and suggestions to improve quality in teaching and research. The IQAC is constituted as per the NAAC guidelines with the Administrator/Vice-Chancellor as the Chairperson. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of the institution. It is a facilitative and participative voluntary system for quality enhancement by introducing suitable intervention strategies. It motivates the faculty to strive for quality improvement. Periodic interaction among the Heads of the Departments and the Faculties is encouraged by the IQAC to pave way for internal quality analysis and suitable ameliorative measures put in place.

The newly recruited teachers and administrative staff are imparted in-service training. At the department level, the lesson plans are evaluated by peers and suggestions are made. Student evaluation of teachers is done periodically both formally and informally and the feedback is used to improve the quality of teaching. The Departmental Research Committee monitors the progress of research of M.Phil. and Ph.D. candidates, avoids redundancy in research proposals, and provides directions for ensuring quality. The research proposals submitted to grant agencies are scrutinized by experts in the field and the suggestions are incorporated. When new measures are evolved for academic and administrative improvements, they are discussed in the Syndicate and the Academic Council. All the improvements suggested by the UGC and the Tamil Nadu State Council for Higher Education (TANSCHÉ) from time to time are introduced in the system suitably.

6.2.4 Does the university encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Autonomy is given to departments to admit students on merit and based on the reservation policy. Complete academic freedom exists for curriculum design to formulate new and innovative programmes of study, to include appropriate experts in the Boards of Studies and Examinations, evolve and follow innovative teaching and evaluation methodologies, to undertake research projects and consultancies, and to conduct conferences and workshops. The academic activity of each faculty is assessed and published in the form of Academic Report every year. The self-appraisal of the individual faculty and the assessment report by the respective heads ensure accountability in academics.

6.2.5 During the last four years, have there been any instances of court cases filed by and against the institute? What were the critical issues and verdicts of the courts on these issues?

Considering the large number of departments of study (49) and various programmes as well as the teaching, nonteaching and student strength, the number of court cases is minimal.

6.2.6 How does the university ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder-relationship?

Grievances from students are redressed by the Mentor-Mentee system as well as by direct representation to the Head of the Department. In addition, An SMS based Grievance Redressal Cell is in place. Students can SMS their grievances which are addressed immediately based on the veracity. Separate cells are in place for Prevention of Sexual Harassment of Women Staff and Students. The grievances of faculty and nonteaching staff can be addressed to the Heads, Deans and also directly to the Vice-Chancellor. Adequate measures are taken to redress all grievances.

6.2.7 Does the university have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Students provide feedback using a questionnaire prepared for the purpose. The opinions of the students with regard to infrastructural facilities is also given due importance. Based on the feedback, steps are taken to improve the quality of teaching and the necessary student support services.

6.2.8 Does the university conduct performance audit of the various departments?

Yes, the self-appraisal form as prescribed by the UGC is given to every teacher in the department. It is filed with the university office every year. This help to evaluate the faculty's improvement in teaching and research work. The self-appraisal form submitted by the individual faculty and the appraisal report given by the Heads of the departments are assessed by the Vice-Chancellor duly assisted by the Deans / Senior Professors in various disciplines. Apart from this, the student appraisal form prescribed by the UGC is also given to each department to assess the performance of respective teachers handling the courses.

The University finance and accounts are maintained by the Finance Officer appointed by the State Government and periodically audited by Local Fund Audit and Accountant General's audit.

6.2.9 What mechanisms have been evolved by the university to identify the developmental needs of its affiliated institutions?

Not applicable

6.2.10 Does the university have a vibrant College Development Council (CDC) / Board of College and University Development (BCUD)? If yes, detail its structure, functions and achievements.

Not applicable

6.3 Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

- To enhance the professional development of teaching staff, the university encourages the staff to attend and conduct orientation programmes, refresher courses, summer and winter schools, workshops, in-service training programmes, seminars, conferences, and symposia.
- Teachers who have joined with M.Phil. degree are encouraged to do Ph.D. Study leave is sanctioned to them to complete their doctoral programme.
- The university constantly motivates faculty to apply for extramural grants for research.
- For non-teaching staff members, the university conducts training programmes.

6.3.2 What is the outcome of the review of various appraisal methods used by the university? List the important decisions.

- The Self-Appraisal reports are obtained from staff and analyzed by a committee constituted for deciding on promotions for teaching and non teaching staff. Assessment by the Head of Department is also obtained annually.

- To assess the academics, the IQAC cell obtains appraisal reports on teachers and analyzes the quality of teaching. The course allotments to teachers are decided based on review of the appraisal.

6.3.3 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have benefitted from these schemes in the last four years? Give details.

The university has separate teaching and nonteaching staff cooperative societies, staff club, university staff welfare association and staff quarters. The university also offers fee concession for wards to pursue their education. Medical assistance is offered to all the staff members in the university.

| Name of the Scheme | Total No. of beneficiaries | Total Amount sanctioned Rs. |
|---|----------------------------|--------------------------------|
| Tuition fee concession for wards of non-teaching staff | 560 | 46,45,650 |
| Annamalai University Health Fund Scheme (Teaching and Non-Teaching) | 149 | 1,05,29,279 |

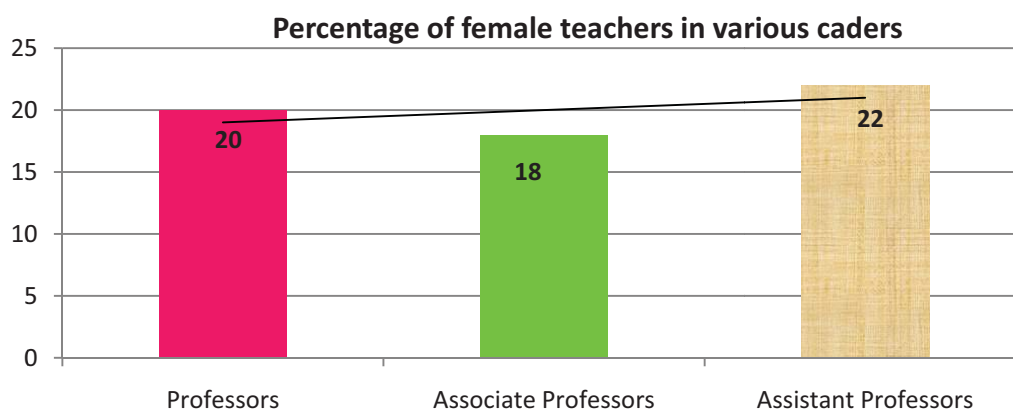
6.3.4 What are the measures taken by the University for attracting and retaining eminent faculty?

The university has created a conducive environment for attracting and retaining eminent faculty by providing academic freedom, adequate infrastructure, recognition, and awards.

6.3.5 Has the university conducted a gender audit during the last four years? If yes, mention a few salient findings.

The university conducts gender audit at both staff and student levels every year. The enrolment of female students in the Faculties of Medicine and Dentistry is more than 50 percent in the past five years with a linear upward trend in female students' enrollment. In the Faculties of Agriculture and Engineering & Technology, though there was a decline in female enrollment during 2010-2011 it has increased thereafter. This analysis has indicated and waiting rooms to cater to the need arising in future. Although it is evident that there is improved access to higher education for women that has reduced the gender gap in the GER in professional degree programmes, the analysis has also indicated the need for establishing facilities for female students in the university like better hostels and waiting rooms.

Gender analysis in other faculties indicate that enrollment of female students is above 40 per cent for arts, science, and language programmes during the last five years and the female participation shows a positive trend. The gender analysis among teaching staff has indicated a greater representation of female staff in key positions and committees.



6.3.6 Does the university conduct any gender sensitization programmes for its faculty?

Yes.

6.3.7 What is the impact of the University's Academic Staff College Programmes in enhancing the competencies of the university faculty?

Not Applicable.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism available to monitor the effective and efficient use of financial resources?

The Finance Officer appointed by the Local Fund Audit (LFA) Department of the Government of Tamil Nadu in association with the accountants manages the finances of the university. The expenditures are audited by the LFA. The Accountant General's audit verifies the accounts periodically.

6.4.2 Does the university have a mechanism for internal and external audit? Give details.

Yes. Internal audit is done by the University accounts section including the Finance officer nominated by the government and external auditing is done annually by the Local Fund Audit. This in turn is reviewed by the AG audit.

6.4.3 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

ABSTRACT OF GENERAL FUND ANNUAL ACCOUNTS FOR THE YEAR 2007-2008

| S. No. | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|--------|---------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1 | General Account | (2,00,79,09,739.43) | 86,38,21,336.29 | (1,14,40,88,403.14) | 1,22,13,10,569.74 | (2,36,53,98,972.88) |
| 2 | Engineers Stock A/C | | | | | |
| | Cement | 1,98,79,994.06 | 1,59,12,395.00 | 35,92,389.06 | 2,75,89,700.00 | 82,02,689.06 |
| | Steel | (4,25,74,011.37) | 2,11,43,496.00 | (2,14,30,515.37) | 3,02,38,385.00 | (5,16,68,900.37) |
| 3 | Advances | (1,60,32,438.03) | 2,44,89,925.00 | 84,57,486.97 | 2,06,14,079.00 | (1,21,56,592.03) |
| 4 | AU Alumni Association A/C | 97,177.00 | - | 97,177.00 | 97,177.00 | 0.00 |
| 5 | Loan | 1,92,16,23,328.60 | 53,36,40,000.00 | 2,45,52,63,328.60 | 15,31,00,000.00 | 2,30,21,63,328.60 |
| | Total | (12,49,15,689.17) | 1,45,90,07,152.29 | 1,33,40,91,463.12 | 1,45,29,49,910.74 | (11,88,58,447.62) |
| II | INVESTMENT ACCOUNT * | 4,06,96,934.00 | 18,72,000.00 | 4,25,68,934.00 | | 4,25,68,934.00 |

* Computer Science Investment A/c Opening Balance merged with General fund Investment A/c Opening Balance

ABSTRACT OF ADVANCES

| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|------|---------------------------------------|----------------------|--------------------|-------------------|--------------------|----------------------|
| 1. | General Account | (16314577.00) | 24346443.00 | 8031866.00 | 20512079.00 | (12480213.00) |
| 2. | a) Festival Advance; b) Marriage Loan | 282138.97 | 143482.00 | 425620.97 | 102000.00 | 323620.97 |
| | Total | (16032438.03) | 24489925.00 | 8457486.97 | 20614079.00 | (12156592.03) |

ABSTRACT OF GENERAL FUND ANNUAL ACCOUNTS FOR THE YEAR 2008-2009

| S. No. | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|--------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------|
| 1 | General Account | (2,36,53,98,972.88) | 1,12,61,66,468.49 | (1,23,92,32,504.39) | 15,42,320,620.16 | (2,78,15,53,124.55) |
| 2 | Engineers Stock A/C | | | | | |
| | Cement | 8,02,689.06 | 1,63,38,558.00 | 2,45,41,247.06 | 1,98,18,440.00 | 47,22,807.06 |
| | Steel | (5,16,68,900.37) | 2,02,58,187.00 | (3,14,10,713.37) | 2,84,99,065.00 | (5,99,09,778.37) |
| 3 | Advances | (1,21,56,592.03) | 2,03,10,022.00 | 81,53,429.97 | 2,13,97,608.00 | (1,32,44,178.03) |
| 4 | Loan | 2,30,21,63,328.60 | 78,98,00,000.00 | 3,09,19,63,328.60 | 33,47,50,000.00 | 2,75,72,13,328.60 |
| | Total | (11,88,58,447.62) | 1,97,28,73,235.49 | 1,85,40,14,787.87 | 1,94,67,85,733.16 | (9,27,70,945.29) |
| II | INVESTMENT ACCOUNT * | 4,28,34,934.00 | 69,63,130.00 | 4,97,98,064.00 | | 4,97,98,064.00 |

* Computer Science Investment A/c Opening Balance merged with General fund Investment A/c Opening Balance

ABSTRACT OF ADVANCES

| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|------|---|-------------------------|-----------------------|---------------------|-----------------------|-------------------------|
| 1. | General Account | (1,24,80,213.00) | 2,01,82,690.00 | 77,02,477.00 | 2,12,78,608.00 | (1,35,76,131.00) |
| 2. | Festival Advance, Marriage Loan & Permanent Advance | 3,23,620.97 | 1,27,332.00 | 4,50,952.97 | 1,19,000.00 | 3,31,952.97 |
| | Total | (1,21,56,592.03) | 2,03,10,022.00 | 81,53,429.97 | 2,13,97,608.00 | (1,32,44,178.03) |

ABSTRACT OF GENERAL FUND 2009 – 2010

| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|-----------------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| 1 | General Account | (2,78,15,53,124.55) | 1,43,05,21,115.88 | (1,35,10,32,008.67) | 2,37,63,52,690.62 | (3,72,73,84,699.29) |
| 2 | Engineers Stock A/C | | | | | |
| | Cement | 47,22,807.06 | 1,88,55,359.00 | 2,35,78,166.06 | 1,95,70,900.00 | 40,07,266.06 |
| | Steel | (5,99,09,778.37) | 2,65,82,088.00 | (3,33,27,690.37) | 2,81,46,963.00 | (6,14,74,653.37) |
| 3 | Advances | (1,32,44,178.03) | 2,62,86,810.00 | 1,30,42,631.97 | 2,77,77,025.00 | (1,47,34,393.03) |
| 4 | Loan | 2,75,72,13,328.60 | 86,27,40,000.00 | 3,61,99,53,328.60 | 24,40,30,000.00 | 3,37,59,23,328.60 |
| | Total | (9,27,70,945.29) | 2,36,49,85,372.88 | 2,27,22,14,427.59 | 2,69,58,77,578.62 | (42,36,63,151.03) |
| II | INVESTMENT ACCOUNT | 4,97,98,064.00 | 29,69,28,640.00 | 34,67,26,704.00 | 15,00,000.00 | 34,52,26,704.00 |
| ABSTRACT OF ADVANCES | | | | | | |
| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
| 1 | General Account | (1,35,76,131.00) | 2,62,14,877.00 | 1,26,38,746.00 | 2,77,21,025.00 | (1,50,82,279.00) |
| 2 | Festival Advance | 3,31,952.97 | 71,933.00 | 4,03,885.97 | 56,000.00 | 3,47,885.97 |
| | Total | (1,32,44,178.03) | 2,62,86,810.00 | 1,30,42,631.97 | 2,77,77,025.00 | (1,47,34,393.03) |

ABSTRACT OF GENERAL FUND 2010 – 2011

| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|-----------------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| 1 | General Account | (3,72,73,84,699.29) | 2,37,22,22,796.46 | (1,35,51,61,902.83) | 2,88,88,25,550.21 | (4,24,39,87,453.04) |
| 2 | Engineers Stock A/C | | | | | |
| | Cement | 40,07,266.06 | 2,07,01,606.00 | 2,47,08,872.06 | 1,79,31,245.00 | 67,77,627.06 |
| | Steel | (6,14,74,653.37) | 2,21,00,712.00 | (3,93,73,941.37) | 2,08,85,566.00 | (6,02,59,507.37) |
| 3 | Advances | (1,47,34,393.03) | 2,57,17,265.00 | 1,09,82,871.97 | 2,17,16,346.00 | (1,07,33,474.03) |
| 4 | Loan | 3,37,59,23,328.60 | 85,60,15,968.58 | 4,23,19,39,297.18 | 54,36,66,485.00 | 3,68,82,72,812.18 |
| | Total | (42,36,63,151.03) | 3,29,67,58,348.04 | 2,87,30,95,197.01 | 3,49,30,25,192.21 | (61,99,29,995.20) |
| II | INVESTMENT A/C | 34,52,26,704.00 | 29,96,00,000.00 | 64,48,26,704.00 | 58,69,15,400.00 | 5,79,11,304.00 |
| ABSTRACT OF ADVANCES | | | | | | |
| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
| 1 | General Account | (1,50,82,279.00) | 2,56,72,823.00 | 1,05,90,544.00 | 2,17,16,346.00 | (1,11,25,802.00) |
| 2 | Festival Advance | 3,47,885.97 | 44,442.00 | 3,92,327.97 | — | 3,92,327.97 |
| | Total | (1,47,34,393.03) | 2,57,17,265.00 | 1,09,82,871.97 | 2,17,16,346.00 | (1,07,33,474.03) |

ABSTRACT OF GENERAL FUND 2011 – 2012

| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
|-----------------------------|---------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| 1 | General Account | (4,24,39,87,453.04) | 1,87,00,88,213.13 | (2,37,38,99,239.91) | 2,81,53,81,137.45 | (5,18,92,80,377.36) |
| 2 | Engineers Stock A/C | | | | | |
| | Cement | 67,77,627.06 | 1,80,21,977.00 | 2,47,99,604.06 | 1,67,54,000.00 | 80,45,604.06 |
| | Steel | 6,02,59,507.37 | 1,61,24,860.00 | (4,41,34,647.37) | 1,92,25,633.00 | (6,33,60,280.37) |
| 3 | Advances | (1,07,33,474.03) | 2,91,73,564.00 | 1,84,40,089.97 | 2,82,93,342.00 | 98,53,252.03 |
| 4 | Loan | 3,68,82,72,812.18 | 1,56,09,92,442.00 | 5,24,92,65,254.18 | 76,18,71,234.00 | 4,48,73,94,020.18 |
| | Total | 61,99,29,995.20 | 3494401056.13 | 2,87,44,71,060.93 | 3,64,15,25,346.45 | (76,70,54,285.52) |
| II | INVESTMENT A/C | 5,79,11,304.00 | 25,54,273.00 | 6,04,65,577.00 | 4,71,28,352.00 | 1,33,37,225.00 |
| ABSTRACT OF ADVANCES | | | | | | |
| S.No | Head of Account | Opening Balance | Receipts | Total | Charges | Closing Balance |
| 1 | General Account | (1,11,25,802.00) | 2,90,36,499.00 | 1,79,10,697.00 | 2,82,93,342.00 | (1,03,82,645.00) |
| 2 | Festival Advance | 3,92,327.97 | 36,099.00 | 4,28,426.97 | | 4,28,426.97 |
| 3 | Permanent Advance | | 1,00,966.00 | 1,00,966.00 | | 1,00,966.00 |
| | Total | (1,07,33,474.03) | 2,91,73,564.00 | 1,84,40,089.97 | 2,82,93,342.00 | (98,53,252.03) |

6.4.4 Have the accounts been audited regularly? What were the audit objections, if any, and how were they complied with?

Yes. Audit objections were raised by Local Fund Audit and they were replied and sorted out by a Committee appointed by the University. Further, the state government also appointed a special audit team to go into the audit objections raised and to sort out the issues. Subsequently the State Government has appointed an Administrator for the University.

6.4.5 Narrate the efforts taken by the university for resource mobilization.

University submits claim for block grant and gets it reimbursed from the State Government from time to time. Additional resources in terms of plan grant from UGC, Research Funds from UGC, DST, DBT, ICAR, MOEN, MOES, INCID, DRDO, etc. are also mobilised through Grant proposals. Grants for infrastructure through DST-FIST, SAP, CAS grants from UGC are also obtained by various departments. Industry and corporate collaborations are also encouraged for resource mobilisation. Alumni also extend support for infrastructure and endowments.

6.4.6 Is there any provision for university to establish corpus fund? If yes, give details.

No

6.5 Internal Quality Assurance System

6.5.1 Does the university conduct an academic audit of its departments? If yes, give details.

The academic audit of each department is done by the Head of the Department and senior teachers. Before the commencement of the semester, academic activities are planned at the staff meeting conducted by the Head of the Department and progress is continuously monitored. The lecture plans prepared by the teachers are evaluated by peers and endorsed by the HOD. Academic Reports are prepared annually and placed in the Academic Council. Department-wise and Faculty-wise review meetings are held periodically to formulate policies to assess and strengthen the academic functioning of the departments of study. These meetings address issues such as lesson plan, weekly log, quality assurance in teaching and research, students' performance, and examination reforms. Further, the IQAC has suggested academic audit for different departments of studies to be conducted during February, 2014 involving Head of the Department and Peer team members comprising senior teachers and external experts for every department of study.

6.5.2 Based on the recommendations of academic audit, what specific measures have been taken by the university to improve teaching, learning and evaluation?

Weekly log book for teachers was advocated and it was reviewed. An examination reform committee was constituted at the University level and its suggestions like OMR and increased objective type of questions in the examinations were taken up.

6.5.3 Is there a central body within the university to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Yes. The Internal Quality Assurance Cell continuously reviews the teaching / learning process. The structure is as furnished below:

| | |
|-------------------------------|--|
| Chairperson | Thiru Shiv Das Meena, I.A.S Principal Secretary to Government / Administrator Annamalai University |
| Senior Administrative Officer | Dr. N. Panchanatham, Registrar, Annamalai University |
| Senior Teachers (Members) | Dr. G. Ravindran, Dean, Faculty of Education Annamalai University |

| | |
|---------------------------|---|
| Senior Teachers (Members) | Dr. R. Rajendran Dean, Faculty of Arts Annamalai University |
| | Dr. K. Kathiresan, Dean, Faculty of Marine Sciences, Annamalai University |
| | Prof. RM. Chandrasekaran, Director, DDE, A.U |
| | Dr. M. Nagarajan, Prof. & Head of Library & Information Sciences, Annamalai University |
| | Dr.S. Nagini Prof. & Head of Biochemistry & Biotechnology, Annamalai University |
| | Dr. C. Madhavi, Prof. & Head of Business Administration, Annamalai University |
| | Dr. C. Antony Jayasehar, Prof. of Civil & Structural Engineering, Annamalai University |
| | Prof. V. Srinivasan, Department of Computer Science & Engineering / Innovation Centre |
| External Experts Members | Dr. C. Thangamuthu Former Vice - Chancellor, Bharathidasan University |
| | Dr. R. Elango Former Dean, Faculty of Arts, A.U |
| Co-ordinator of IQAC | Dr. J. Vasanthakumar, Dean, Faculty of Agriculture, Annamalai University |
| Nominees | (i) One From Local Society, Students, Alumni (ii) One from Employers / Industrialists/ Stakeholders |

- A meeting of IQAC is organized in the beginning of the Academic year to approve the proposed activities of the year.
- Frequent meetings are organized at least one per quarter to review the activities and to take up new programme.
- Sensitization programme is organized for all stakeholders.
- Seminars and Workshops are organized at different levels to prepare AQAR.
- The important decision of IQAC will be placed in the syndicate for their approval.
- Feedback mechanism provided in IQAC helps to get the outcome of continuous teaching and learning process.
- Periodic academic audit also strengthens the outcome of teaching & learning

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

The IQAC has contributed to institutionalising several good practices which have promoted quality assurance: (i) preparation of lesson plans peer-reviewed by colleagues and a weekly log to record how the lessons were transacted in the classroom (ii) programmes for keeping them up-to-date in latest pedagogical skills as well as in their own disciplines, (iii) obtaining feedback from the students which is used by the teachers to improve their classroom teaching and management (iv) conducting regular tutorial / special classes (v) special classes for slow learners (vi) examination reforms and (vii) student progression cell.

The IQAC regularly audits the activities of the doctoral committees for ensuring the quality of doctoral dissertations through regular review of student progress in research, presentation in public forum of the research work in progress, pre-submission presentation prior to submission of thesis, with the suggestions being incorporated in the thesis in consultation with the doctoral committee.

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the university for implementation?

The following decisions of the IQAC have been placed before the statutory authorities of the university for implementation:

- Doctoral committees with experts from both within the institution and from other institutions.
- Making pre-submission presentation of Ph.D. thesis mandatory in all departments.
- Requiring that minutes be recorded of Ph.D. viva-voce examinations which are to be sent to the Controller of Examinations.
- Resources Persons for in-service programme be invited from other institutions also.
- A committee for scrutinizing manuscripts of books authored by faculty prior to publication.
- Establishment of Director of Research and Development Cell for ensuring quality of research proposals submitted to funding agencies.
- Financial Assistance and support to teachers for participation in overseas conferences / seminars.
- Teaching / Research collaboration with overseas institutions and organizations.
- Consultancy charges varying proportion based on the type of consultancy.

6.5.6 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes, Dr.C. Thangamuthu, Former Vice-Chancellor, Bharthidasan University and Dr. R.Elango, Former Dean, Faculty of Arts, Annamalai University are included as external members of IQAC, Annamalai University. They contribute in terms of organizing IQAC activities and sensitizing other IQAC members for planning and methodologies for academic audit through experience sharing.

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

Yes, IQAC has conducted study of proportion of students enrolled in different courses and their performance in various examinations over years; tutorial and counseling as well as remedial courses were provided for the needy.

6.5.8 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

Department-wise review meetings are conducted to formulate policies/design strategies to strengthen the functioning of the departments of study in various dimensions. Several issues are addressed on a regular basis including lesson plan, weekly log, quality assurance in teaching, students' performance, examination reforms, improvement of infrastructural facilities placement details, research, consultancy and extension activities, energy conservation measures, gender sensitization, and general maintenance of the departments and surroundings. The constraints are identified based on analysis and review. The exercise has provided scope for introspection and need for improvement. As a result of these meetings, all faculty members prepare lecture plans, which has improved the quality of teaching and time management. More teachers have applied for projects.

Priority is given for computerization and networking of the following branches that are located in the same campus. Pay Section, Examination Section, Admission Section, Library Scholarship Section, Central Office.

Any other information regarding Governance, Leadership and Management which the university would like to include.

CRITERION VII: INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the university conduct a Green Audit of its campus?

Yes, The university has instituted a comprehensive Green Audit procedure with reference to use of water, energy, and green cover.

7.1.2 What are the initiatives taken by the university to make the campus eco-friendly?

* Energy conservation

- Awareness has been created among staff and students to save energy
- Posters/notices are placed at vantage points in the departments on energy saving measures
- Incandescent bulbs are replaced with compact fluorescent lamps.
- Lights, fans, computers, and laptops are switched on only when required
- Lights are not turned on in rooms and labs where natural light is sufficient
- Window ACs are replaced with more efficient split ACs and temperature is set at 25°C.
- The existing ACs are turned off when not required
- Leaking taps are attended to immediately

* Use of renewable energy

In line with the initiatives of the Government on the use of renewable energy sources to augment the conventional sources, the university has initiated various measures from time to time. Solar Water heaters have been installed in a few hostels and in the University Guest House. Biogas plants have also been installed and alternate sources such as sugarcane pressmud is used to operate the biogas plant that supplies energy for irrigating the farm. Funds obtained from the Ministry of Renewable Energy Sources and internal resources have been used for these initiatives

* Water harvesting – Yes

Rain water harvesting is done in different places of the University campus and we have three large water ponds to cater to the needs of various hostels. Farm ponds are excavated in three places to harvest water for cultivation of crops and fish culture.

* Check dam construction – No

* **Efforts for Carbon neutrality**

- The university gardens are established and maintained by the Department of Horticulture. These gardens and tree plantations developed in the Agronomy Experimental farm and Orchard ensure carbon neutrality in the University campus.
- Greening of University offices has been initiated to reduce carbon footprint.
- Printing is done on both sides of the paper.
- Old print-outs are used as note paper.
- All documents are edited thoroughly before printing.
- Department notices and information are sent via email/SMS.
- Use of plastic cups is strongly discouraged.
- The undergraduate students are encouraged to commute to college by cycle or public transport.

* **Plantation -Yes**

Fruits trees, Oil palm, Eucalyptus, Acacia sp., Casuarina, etc are planted in different areas. Avenues are planted with trees like Cassia species, *Peltophorum ferugenum*, *Spathodia companulata*, etc. Tree adoption programmes have also been initiated.

* **Hazardous waste management**

Yes. Sewage water in the university is treated and utilized by growing water grass for cattle feed. Bio/chemical/medical waste is collected by a professional agency and disposed of in a scientific manner.

* **e-waste management**

All condemned computers and other electronic gadgets are auctioned to vendors through the University Works Department.

* **any other (please specify)**

Awareness is created among students and staff in dissuading the use of polythene material and the students are sensitized on the rational use of power and other measures to reduce global warming and to improve carbon credit.

7.2 Innovations

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the university.

- Centralised admission process where the students and parents are assisted with respect to certificate verification, joining hostel, fees payment at one place.
- Academic credit transfer arrangement with overseas Universities such as Tennessee Tech University, US, and Dalhousie, Canada to earn dual degree.
- Supplementing classroom lectures with appropriate online lessons from reputed subject websites.
- Maintaining a weekly log of how the lesson plans were transacted in the classroom.
- In addition to the core courses, the students enrolled in programmes under the Choice Based Credit System (CBCS) are offered a range of optional courses, both within their respective departments as well as in other departments. To cultivate broad intellectual outlook, students are required to take every semester one course unrelated to their major area of study.
- Full time students who wish to improve the marketability of their degrees are permitted to enroll with substantial fee discounts for programmes offered by the University's Directorate of Distance Education.
- Interdisciplinary programmes taught by faculty from diverse departments.
- Special thrust is given to ICT by including compulsory subjects like "Development Communication and Information Management" in the course curriculum. Internet and Edusat facilities are provided to the students for equipping them to meet the global demands.

7.3 Best Practices

1. The Mentor-Mentee system has made a qualitative difference in the academic performance and instilled self-confidence among students. Each faculty member monitors the academic progress of a group of students and guides them to shape their professional career besides dealing with personal issues. The mentors also interact with the parents if necessary.
2. Maintaining a weekly log of how the lesson plans have been transacted in the classroom. This has led to a structured schedule for teachers and better comprehension for students.
3. Making it mandatory for students to enroll in one course every semester outside their departments of study to broaden their intellectual horizons.
4. Introduction of a core course on 'Professional Ethics' in most of the professional programs.
5. Annual Research Methodology Workshops to impart training to researchers on all aspects of research including research design, hypothesis testing, good laboratory practices, statistical and analytical techniques, mechanics of scientific writing, stress

and time management and research ethics. This has provided a platform for faculty to extend their expertise and experience cutting across disciplines. The students after the training can approach faculty in any discipline to sort out their research problems.

6. PG Students are trained to conduct Symposia on thematic issues in National/International Conferences with one student as Chairperson and others as speakers. This has been lauded by the visiting scientists and delegates.
7. The University has put several mechanisms in place to ensure that the examination system is foolproof and action has been taken to reform the examination system. Optical Marking Recognition (OMR) based answer sheets are now in vogue for professional course Entrance examinations to avoid human error besides hastening the process. Answer sheets with OMR based cover page has helped in transferring data to computers besides eliminating manual data entry operation.
8. More Decentralized Governance by Constituting Committees to create a more inclusive ambience. Various committees have been constituted to address different issues in the university including exam reforms, security, projects and consultancies, purchase, anti-ragging, sexual harassment, hygiene and sanitation to name a few. This practice has led to more emotional investment on the job, better governance, quicker redressal and decision making.
9. An SMS based Grievance Redressal Cell is in place. Students can SMS their grievances which are addressed immediately based on the veracity. In addition, squads operate to redress grievances of students.
10. Separate Cells are in place for Prevention of Sexual Harassment of Women Staff and Students.
11. An Equal Opportunities Cell takes care of the needs of the disadvantaged section of students.
12. Anti Ragging Committee to check and prevent the menace of ragging.
13. A mechanism to monitor the hygiene, sanitation and food quality in hostels. Monitoring of water quality of mineral water plants (RO based) installed in hostels, hospital and all the lecture hall complexes.
14. Instilling social responsibility by making participation in NCC/ NSS/YRC mandatory for undergraduate students. Through these organizations, AIDS awareness programmes, blood donation camps, various health camps and socially relevant activities have been undertaken.
15. The Centre for Rural Development, Department of Life Long Learning, Community Medicine, and the Faculty of Agriculture have been doing yeomen service through their extension activities. The University extends maximum cooperation to the Government in the rehabilitation of the Tsunami affected population.

7.3.1 Give details of any two best practices which have contributed to better academic and administrative functioning of the university.

1. The Mentor-Mentee System

Goal

The purpose of this practice is to foster a close rapport between the students and the faculty, to provide guidance to students on all academic matters besides personal counselling and to enhance the potentialities of the students. The main focus of mentorship is to develop the all-round personality of the students and to make them more professionally competent and responsible citizens by the time they leave the thresholds of the University. Each faculty will function as a counsellor for a group of students during the entire period of their study in the University. The teacher will assist the students to cope with the curriculum, understand the University's expectations of its students, participate in co-curricular and extracurricular activities, solve personal issues, as well as groom their skills and aid in personality development. In addition to the mentor, students may also seek counsel from other faculty members.

Evidence of Success

This practice has led to a better sense of belonging and purpose for the students as evidenced by the declining trend of absenteeism, and a perceivable proactive involvement in the academic and other activities in the department. For the teachers this has provided feedback and introspective review of academic transactions.

2. Department wise Review Meetings

Goal

The goal of this practice is to formulate policies/design strategies to strengthen the functioning of the departments of study in various dimensions. The issues addressed in the meetings vary depending on their current relevance. For example at the beginning of the academic year, assessment of enrolments in the various programmes of study, financial assistance to students, anti-ragging measures, improvement of infrastructural facilities in departments and hostels are given priority. Towards the close of an academic year, stock taking is done on various academic parameters and the way forward for the ensuing academic year is planned. Several issues are addressed on a regular basis including lesson plan, weekly log, quality assurance in teaching, students' performance, examination reforms, placement details, research, consultancy and extension activities, energy conservation measures, gender sensitisation, and general maintenance of the departments and surroundings.

Evidence of Success

The exercise has provided scope for introspection and need for improvement. As a result of these meetings, all faculty members prepare lecture plans which has improved the quality of teaching and time management. More teachers have applied for projects.

Any other information regarding Innovations and Best Practices which the university would like to include.

More Decentralized Decision Making by constituting Committees

Goal

The aim of this practice is to create a more inclusive ambience by decentralization and to groom leadership at various levels. Various committees have been constituted to address different issues in the university including exam reforms, hospital, security, projects and consultancies, purchase, security, anti-ragging, sexual harassment, garden, book evaluation, hygiene and sanitation to name a few.

Evidence of Success

This practice has led to more emotional investment on the job, sharing of responsibility, better governance and quicker redressal and decision making.



The Heritage Meenakshi Building, 1920