

PROFILE AND ACTIVITIES OF THE DEEMED UNIVERSITY

Updated—as on 1st September, 2022

The Genesis:

This Deemed to be University in the hallowed name of Swami Vivekananda is a humble attempt by worldwide organization, Ramakrishna Mission, its Sponsoring Society, started by Swami Vivekananda himself 125 years ago, in order to actualize Swami Vivekananda's educational vision of harmoniously blending the best elements of the knowledge pursuits of the East and the West and to impart 'man-making' and character-building education to the youths so that they would not be only acquire knowledge and skills, but also become men and women of wholesome character, with 'heart to feel, head to think, hands to work' (*bhakti, jnana, karma* harmoniously blended), possessed of the qualities of integrity, truthfulness, honesty, purity, selflessness, feeling for the suffering and the underprivileged, etc. Swami Vivekananda wanted a harmonious blend of the *Sanatana Bharatiya Jnana Sampradaya-Parampara* (Eternal Indian Knowledge Systems and Tradition—its spiritual wisdom and remarkable insights into the whole spectrum of human knowledge) with the modern scientific and technological knowledge of the Western world.

More specifically, the University's 'Vision and Mission' are as follows:

Vision and Mission of the University:

Vision:

To be a great centre of learning blending the two sciences—'natural and humanistic'—and harmoniously synthesizing the twin excellences of ancient Indian wisdom and modern scientific knowledge and technological skill, imparting life-building, character-making education to the youths for their individual improvement as well as for the collective good as envisioned by Swami Vivekananda.

Mission:

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- ✓ (Pursuit of Excellence) To strive for excellence in teaching, research and all academic endeavors.
 - ✓ (Blending of Eastern and Western values) To inculcate ancient Indian values like Shraddha (unshakable conviction), purity, truth, selflessness, harmony and peace, blending them with predominantly western values like scientific temper, rational outlook, technological efficiency, teamwork, professional integrity, work ethics, etc., in order to create a band of educated youth with lofty character and integrated personalities with harmonious development of heart, head and hand—faculties of feeling, thinking and willing—bhakti, jnana and karma with yoga or concentration interpenetrating all these.
 - ✓ (Social responsibility) To train and educate the youth to become socially responsible citizens to collectively rebuild a rejuvenated, glorious India by first of all building an impeccable, lofty character at the individual level.
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A Special Feature of the University:

Attempting a harmonious blend of spiritual wisdom of the East and modern scientific and technological knowledge of the West

The vision of the University is, as stated earlier, the actualization of Swami Vivekananda's educational vision, namely, to impart 'man-making' and character-building education to the youths so that they would not be only acquire knowledge and skills, but also become men and women of character, possessed of the qualities of integrity, truthfulness, honesty, purity, selflessness, feeling for the suffering and the underprivileged, etc. Further, Swami Vivekananda wanted the blend of the ancient moral and spiritual wisdom of the East—the humanistic sciences—with the modern scientific and technological knowledge of the West—the natural sciences. The Deemed University is striving to achieve this unique blend by setting up two Schools: The School of Indian Heritage and School of Mathematical Sciences side by side so that scholars well versed in both could be created in a natural way by proximity and continuous exchange of ideas. The University is also trying to seriously explore the realization of Ramakrishna-Vivekananda ideal of Religious Harmony and Peace, as articulated by Swami Vivekananda in his famous two lectures: 'The Ideal of Universal Religion' and 'The Way to the Realization of a Universal Religion' through an institution for the study of and research into comparative religion and philosophy in its most liberal and widest form, through research programmes and the institution of Vivekananda Chair in Comparative Philosophy and Universal Religion.

'Thrust Areas' chosen—*Raison de'tre*

Swami Vivekananda prophesied on the eve of his passing away on 4 July 1902 that "**the spiritual wave that has come to Belur [Math] will last for fifteen hundred years and it shall be a great University. Do not think I imagine it; I see it.**" He also said on the very last day of his life in the mortal frame that: "**Keeping the ancient Indian spiritual ideal and rooted in it, and blending it harmoniously with modern science and technology, we should establish a University at Belur Math.**" This University therefore, bearing Swami Vivekananda's hallowed name is a humble attempt by Ramakrishna Mission to actualize his vision. The various 'thrust areas' of the University have been chosen keeping in mind the above vision of Swami Vivekananda. The motivation for the choice of the 'thrust areas' came essentially from the following considerations:

- (1) These 'thrust areas' are in a sense 'gap areas' in the sense that these areas scarcely receive attention in most of the conventional Universities in India.
- (2) These 'thrust areas' are meant to directly benefit the common man, particularly the underprivileged and the rural/tribal sections of the society, thereby fostering social commitment of higher education

institutions in India as taught by Swami Vivekananda (which aspect, interestingly, the Ministry of Education and University Grants Commission have recently begun to emphasize).

- (3) The Ramakrishna Mission has developed a high degree of expertise and a huge infrastructure and resources at least in some of these areas over several decades, almost a century in some cases, of its educational service.
 - (4) Harmonious blend of the best elements of the East and the West—Western science and technology with the Ancient Indian Heritage, *Sanatana Bharatiya Jnana Sampradaya-Parampara* (Eternal Indian Knowledge Systems and Tradition).
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The following ‘thrust areas’ have been chosen for the University bearing Swami Vivekananda’s hallowed name:

- (1)(a) Disability Management and Special Education,
(b) General & Adapted Physical Education and Yoga
- (2) Agriculture, Integrated Rural and Tribal Development
- (3) Indian Heritage (spiritual, cultural, scientific, sports heritage) including values education for wholesome, integrated character building
- (4) Fundamental and Applied Science education and research (with emphasis on ‘Translational Research’)
- (5) Environment and Disaster Management

Schools/Faculties/Departments/Divisions running various Academic Programmes at the Belur Main Campus and the ‘Off-Campus’ Centres across the country through which the above ‘thrust areas’ are operationalized

The Deemed University has the following Campuses, each of them housing Specialized Faculties conducting various academic programmes to operationalize the above ‘thrust areas’ with the approval of the University Grants Commission, the Ministry of Education, Government of India as well as the various Regulatory Bodies/Agencies:

- (1) **Belur Main Campus:** Mathematical Sciences (Physics, Mathematics, Computer Science including Data Science), Indian Heritage (Sanskrit, Indian spiritual, cultural and scientific heritage, Yoga, Dhrupad Sangeet, Indian classical music), Sports Science.
- (2) **Coimbatore Campus:** Disability Management and Special Education, General & Adapted Physical Education and Yoga, Integrated Rural and Tribal Development, Computer Science and Applications.
- (3) **Ranchi Campus:** Agriculture, Rural & Tribal Development, Agricultural Sciences with thrust on organic farming.
- (4) **Narendrapur Campus:** Agriculture & Rural Development, Integrated Rural Development and Management, Agricultural Bio-technology, Medical Biotechnology (in collaboration with Ramakrishna Mission

Sevapratisthan Hospital, Kolkata), Molecular Biology, Pharmocognosy, Environment and Disaster Management.

The various academic programmes are run by the following 'Schools' housing certain Specialized Faculty Centres located in the various Campuses mentioned above:

- (1) School of Rehabilitation and Sports Sciences
- (2) School of Agriculture and Rural Development
- (3) School of Indian Heritage
- (4) School of Mathematical Sciences
- (5) School of Environment and Disaster Management
- (6) School of Biological Sciences

In recognition of our unique thrust areas to create the human resource in the form of trained teachers for disability management, **UNESCO has honoured us by creating a Chair in the field of 'Inclusive Adapted Physical Education and Yoga'** to promote this unique area. In appreciation of the good work in this area, UNESCO has recently extended the Chair for another term of four years.

Also, in recognition of our social commitment, **the University has been awarded full membership of an organization called GUNI (Global University Network for Innovation), a Europe-based global organization networking Universities across the globe working with social commitment.**

It is a matter of joy and gratification that **National Assessment and Accreditation Council (NAAC) has awarded us the highest grade of A++ with Cumulative Grade Point Average (CGPA) 3.66 out of 4** (just a wee bit less than Indian Institute of Science, Bangalore, which got a CGPA of 3.67) making us achieve the distinction of ranking SECOND in the whole country among Universities accredited in the Revised Accreditation Format up to March 2018.

LATEST REPORT OF THE UNESCO CHAIR ACTIVITIES FOR THE FOUR-YEAR PERIOD (2017–2021) IN THE FIELD OF 'INCLUSIVE ADAPTED PHYSICAL EDUCATION AND YOGA'

1	Name of Chair	UNESCO Chair in 'Inclusive Adapted Physical Education and Yoga (1004)'
2	Date of Establishment	December 2012
3	Name of	Ramakrishna Mission Vivekananda Educational &

	Institution (with a photograph)	Research Institute (RKMVERI), Belur, Howrah-711202, India. 		
4	Name of Chair and Co-Chair with designation (+ portrait photograph)	<p>Chair: Dr. R. Giridharan, Head, Faculty of General & Adapted Physical Education and Yoga, RKMVERI Coimbatore</p>  <p>Email: giri.pd@gmail.com</p>	<p>Co-Chair: Dr. Arkadeb Dutta, Head,</p>  <p>Department of Sports Science & Yoga, RKMVERI Belur</p> <p>Email: arkadeb@gm.rkmveri.ac.in</p>	
5	<p>Significant contributions (300-500 words)</p> <p>Infrastructure development: At Belur campus in West Bengal, a five-storeyed multifaceted spacious building was constructed for conducting postgraduate teaching and research (M.Sc. and Ph.D. in Sports Science and Yoga), with augmented laboratory facilities for research. At the Coimbatore campus in Tamil Nadu, a state-of-the-art infrastructure, 'Vivekananda Inclusive Sports Complex', has been established for training various categories of differently abled students on selective Paralympics sports disciplines throughout the year. It is proposed to send a contingent to the Paralympics to be held in Paris in 2024.</p> <p>Teaching: Pre-service and in-service training programmes at all levels viz. diploma, undergraduate and postgraduate were conducted at the Coimbatore Campus. New postgraduate and research programmes were introduced in the field of Sports Science and Yoga at the Belur Campus.</p> <p>Training: The Coimbatore Campus organized a Workshop on 'Wheelchair Accessibility and Sports' in collaboration with Leonard Cheshire Disability, London. The present UNESCO Chair, Dr.R.Giridharan, attended the Special Olympics Leadership Academy Level I, II & III programme held at New Delhi and Kolkata.</p> <p>Research: Innovative research programme entitled "Spatial Perception</p>			

Audio Game for the Visually Challenged" for the enhancement of self-sustenance and self-dependence skills in daily life for the visually impaired was carried out in Department of Sports Science at the Belur Campus. A field project to improve the education of the tribal children was taken up under Division of Educational Research (DER-NCERT) and a project under ICSSR-SRC, for improving the ability of students with visual impairment.

Extension: As in previous years, the Chair organized annual events like 'Unified Play Day', 'International Day of Yoga', and 'International Day for Persons with Disabilities'.

The Chair also conducted a 5-day Yoga Camp at Ramakrishna Mission Vidyapith, a remote tribal school in the State of Chhattisgarh for 300 tribal students.

Conferences: National level seminar/webinars organized: "Recent Trends: Research in Sports Science and Yoga", "Scientific Approach to Sports Performance and Assessment", "New Horizons in Sports Sciences: Achieving High Performance", "Addressing Barriers in the Environment and Universal Design" in collaboration with NIEPMD, Chennai, and "Swami Vivekananda's Educational Vision vis-à-vis National Educational Policy 2020" wherein Dr Ramesh Pokhriyal 'Nishank', the Hon'ble Minister of Education, Government of India, was the keynote speaker.

Collaboration: Memoranda of Understanding (MoUs) were signed with three pioneering organisations: (i) National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, a prestigious Institute under the India Government, (ii) Institute of Neurosciences Kolkata (INK), one of its kind in the Eastern India, (iii) The Dept. of Sports Science, University of Calcutta, in order to forge research collaborations in the fields of neuro-scientific and physiological aspects of inclusive physical education and yoga.

Human Resource/Manpower: Qualified faculty members were recruited to strengthen the Chair activities at the Belur Campus, while at the Coimbatore campus faculty recruitment drive in the fields of Special Education and Adapted Physical Education is in progress.

We report with evident pleasure that our University as a whole was accredited by National Assessment and Accreditation Council (NAAC), an autonomous body under the Government of India, with the highest A++ grade (CGPA 3.66/4), ranking SECOND in India in the Revised Accreditation Format in 2018.

UNESCO CHAIR/UNITWIN NETWORK PROGRESS REPORT FORM

Title of the Chair/Network:	UNESCO Chair in ‘Inclusive Adapted Physical Education and Yoga (1004)’
Host Institution:	Ramakrishna Mission Vivekananda Educational & Research Institute (RKMVERI), Belur, Howrah-711202, India.
Date of establishment of Chair/Network: (mm, yyyy)	12, 2012 (December 2012)
Period of activity under report: (mm, yyyy - mm, yyyy)	05, 2017—12, 2021 (May 2017 – December 2021)
Report established by: (name, position, email)	<ol style="list-style-type: none"> Outgoing Chair: Dr Asis Goswami, former Head, Department of Sports Science & Yoga, RKMVERI Belur. Email: asis.goswami@gmail.com Incoming Chair: Dr. R. Giridharan, Head, Department of General and Adapted Physical Education & Yoga, RKMVERI Coimbatore. email: giri.pd@gmail.com Incoming Co-Chair: Dr. Arkadeb Dutta, Head, Department of Sports Science & Yoga, RKMVERI Belur. Email: arkadeb@gm.rkmvu.ac.in, arkadeb@gm.rkmvu.ac.in

To be returned by electronic mail to both: unitwin@unesco.org and i.nichanian@unesco.org

Or by mail to UNESCO, Division for Policies and Lifelong Learning Systems
 Section for Higher Education
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 Fax: 33 (0)1 45 68 56 26/27/28

1. Executive Summary:

Major outcomes, results and impact of the Chair, including on national policies, in relation to its objectives as stated in Article 2 of the Chair Agreement (between the Institution and UNESCO)
 (Not exceeding 300 words)

During the period 2017-2021, the Chair has undertaken several educational, training and research activities in the areas of Disability Management, Special Education, Adapted Physical Activity, Sports Science and Yoga, spanning across the Coimbatore campus and Belur campus of the University, with an aim to disseminating and strengthening knowledge in these highly specialized areas and improve lives of people, especially the differently abled, through Inclusive Adapted Physical Education, Sports and Yoga. The major milestones achieved by the Chair during this period are as follows:

Infrastructure development: In 2018, a five-storey building christened as ‘Atma-Vikas’ (literally, five-layered self-development) that houses the Department of Sports Science and Yoga, equipped with modern laboratories and classrooms, state-of-the-art conference room, a fully functional fitness centre and huge Yoga halls, was inaugurated and was dedicated exclusively to teaching and research in the fields of Sports Sciences and Yoga.

Teaching: Two new postgraduate programmes (M.Sc. in Sports Science, and M.Sc/M.A. in Yoga) and two new research programmes (Ph.D. in Sports Science and Ph.D. in Yoga) have been launched during this period in the Department of Sports Science and Yoga to create the necessary human resource well versed in the scientific aspects of sports and yoga.

Research: On the research front, extensive research involving visually impaired children resulted in development of an innovative gaming platform named *Drishtiheen Digidarshan Sabda-kreeda* (Spatial Perception Audio Game for the Visually Challenged) which aims at enhancing self-sustenance and self-dependence skills in daily life and activities of the visually impaired. This research resulted in patent/design registration and award of Ph.D. in Sports Science to the first research scholar in this area by our RKMVERI Deemed University.

Extension: On the extension activity and knowledge dissemination front, the Chair has undertaken notable activities for popularization Yoga as an easy and effective life-style-improving mind-body technique by organizing International Yoga of Day on 21st of June every year for three consecutive years 2017, 2018 and 2019; organizing subject-specific focussed workshops relating to Yoga : Yoga and Diabetes (2017) and Yoga & Women’s health (2019). A 5-day Yoga Camp was also organized at Ramakrishna Mission Vidyapeeth, a remote tribal school at Narainpur in the State of Chhattisgarh which was attended by 300 tribal students.

Conferences: Two National seminars were organised by the Chair in Belur campus : one on

“Recent Trends: Research in Sports Science and Yoga” (9-10 March 2018) and “Scientific Approach to Sports Performance and Assessment” (15-16 March 2019). During covid-19 pandemic when regular activities were jeopardised, the Chair quickly adopted the digital mode and organized a national level webinar on “New Horizons In Sports Sciences: Achieving High Performance” (19-20 June 2020) which saw overwhelming participation. In the Coimbatore campus of the University, two national conferences were held, one on “Addressing Barriers in the Environment and Universal Design” (14-16 November, 2019) in collaboration with National Institute for Empowerment of Persons with Multiple Disabilities (Divyangjan), Chennai, and the other on “Inclusive Education and Adapted Physical Education: Traditional and New Approaches in Developing 21st Century Skills for Students with Special Needs” (21-22 February 2020). Apart from the above, the Chair also organized a national level webinar on “Swami Vivekananda’s Educational Vision vis-à-vis National Educational Policy 2020” on 19 October 2020 wherein Dr Ramesh Pokhriyal ‘Nishank’, the Hon’ble Minister of Education, Government of India was the keynote speaker.

Collaboration: The Chair also was instrumental in establishing Memoranda of Understanding (MoUs) with two leading Government of India organisations, namely, the National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, and the Institute of Neurosciences Kolkata (INK) in order to forge research collaborations in the fields of neuro-scientific and neuro-physiological aspects of inclusive physical education and yoga.

Manpower: Five highly qualified faculty members were recruited during the four-year period under report, two in 2019 and three more in 2021, to strengthen and reinforce the academic activities (research, teaching and extension) in the Department of Sports Science and Yoga at Belur campus. A major faculty recruitment drive is going on in Coimbatore campus at the Departments of Disability Management and Special Education and General and Adapted Physical Education, in order to on-board some of the best personnel specializing in Special Education, Hearing Impairment, Mental retardation, Intellectual Disability, Speech Therapy, Audiology, Occupational Therapy etc. With such a wide variety of expertise of great diversity, it is planned to conduct translational human research with promises of scientific and technologically helpful solutions in the lives of the disabled. **We report with evident pleasure and pride that RKMVERI University as a whole was accredited by National Assessment and Accreditation Council (NAAC) under the Government of India with the highest A++ grade (CGPA 3.66/4),**

with an all-India rank second in the whole country among the higher educational institutions accredited by NAAC in the Revised Accreditation Framework.

2) Activities:

Overview of activities undertaken by the Chair during the reporting period

a) Education/Training/Research

(key education programmes and training delivered and research undertaken by the Chair during the reporting period, target group and geographical coverage)

i) Education (leading to certificate)

1. The following courses are being conducted by the Faculty of General and Adapted Physical Education and Yoga (GAPEY) of the University on a regular basis:
 - i. Ph.D in Physical Education
 - ii. Master of Philosophy (M.Phil.) in Physical Education
 - iii. Master of Physical Education (M.P.Ed.)
 - iv. Bachelor of Physical Education (B.P.Ed.)
 - v. Bachelor of Science in Physical Education (B.Sc.)
 - vi. Diploma in Physical Education
2. The following courses are being conducted by the Faculty of Disability Management and Special Education (FDMSE) of the University, Coimbatore, on regular basis:
 - i. Ph.D. in Special Education [Visual Impairment (VI), Hearing Impairment (HI), Mental Retardation (MR)] M.Phil. in Special Education (VI, HI, MR) Other Courses running with the recognition/approval of the Statutory Body names ‘Rehabilitation Council of India (RCI)’
 - ii. M.Ed. in Special Education (VI, HI, MR)
 - iii. B.Ed. in Special Education (VI, HI, MR)
 - iv. D.Ed. in Special Education (VI, HI, MR)
 - v. DSLI – Diploma in Sign Language Interpretation
(VI-Visual Impairment, HI-Hearing Impairment, MR-Mental Retardation)

In addition Diploma in Theatre Arts for Holistic Development and Certificate course in Assistive Technology were also conducted.

Academic courses in Main Campus at Belur Math: The Department of Sports Science and Yoga is conducting the following programmes at present:

 1. Integrated M.Phil.- Ph.D. in Sports Science
 2. Integrated M.Phil. - Ph.D. in Yoga
 3. M.Sc. in Sports Science
 4. M.A./M.Sc. in Yoga
 5. Post Graduate Diploma in Yoga
 6. Certificate Course in Basic Ayurveda, Panchakarma and Naturopathy

	(CBAPN) 7. Certificate Course in Yoga (CCY) 8. Outreach programme in Yoga for Health and Wellbeing
ii) Training (short term)	<p>2017:</p> <p>1. Wheelchair Accessibility and Sports One day workshop on Wheelchair Accessibility and Sports was jointly organised by GAPEY, Leonard Cheshire Disability and University college of London and Global Disability Innovation Hub on 31.05.2017.</p> <p>2. Training programme on "Cardio-pulmonary resuscitation (CPR)" was organised for the Sports Science and Yoga Students of Belur Campus on 8th September, 2017. The training was delivered by Dr. Tapas Mondal, Associate Professor, Division of Paediatric Cardiology, Dept. of Paediatrics, McMaster University, Canada.</p> <p>2018:</p> <p>3. Faculty members from Coimbatore campus, Dr. P.J. Sebastian and Dr.R. Giridharan attended the Special Olympics Leadership Academy Level III programme held in Kolkata during January 2018. Mr. Triloki Prasad, Research Scholar of Belur Campus of the University, attended Level I programme. The programme was delivered by Ms. Mary Davis, CEO, Special Olympics International and Dr. John Dow, MD, Special Olympics Asia Pacific Region.</p> <p>4. Dr. Asis Goswami (outgoing Chair) participated and delivered lectures at the Athletic Coaches Association of Bengal on "A few scientific considerations for running events" in August 2018. This lecture was aimed at providing solutions to specific issues related to analysis of performance of the sports persons. About 30 coaches had attended the programme.</p> <p>2019:</p> <p>5. Training sessions were conducted to provide Yoga practice for students. This activity includes teaching of Asana for healthy living and wellbeing. This has started from 15 January and would continue till 30 April 2019, in the gymnasium of the Belur Campus.</p> <p>2021:</p> <p>6. A short term Faculty Development programme was organized at the Faculty of Disability Management, RKMVERI, Coimbatore, on the theme "Training for Social Connectedness and Inspiration" during 1st to 5th February 2021 in online mode. The programme was sponsored by AICTE-ATAL Academy, New Delhi. Total number of 134 participants from all over the country attended the programme. Swami Atmapriyananda, Pro-Chancellor, RKMVERI – Belur Math, inaugurated the programme and delivered a lecture on "Harmonizing Eastern Philosophy & Western Science". N. Muthaiah, Dean, School of Rehabilitation Science, RKMVERI, delivered the welcome address.</p>

iii) Research	<p>Ongoing Research Activities</p> <ol style="list-style-type: none"> 1. Improving self-sustainability of visually impaired is one of our prime research goals. The Chair wants to address and understand spatial learning ability in the blind persons through sound source localization, planning and reaching abilities and accordingly developing sound-assisted technological devices to be used by visually impaired subjects for precise navigational skills in daily activities. In this regard, a physical-gaming platform called "Dristiheen Digdarshan Sabdo Krira" was designed at RKMVERI which improves acuity in spatial mobility and reaching through proprioception has been developed. "Dristiheen Digdarshan Sabdo Krira" is registered as Intellectual Property (The Patent Office Journal No. 27/2019 Dated 05/07/2019 page 28999). 2. Another ongoing project in (FDMSE) sponsored by Indian Council of Social Science Research, Southern Regional Centre, Osmania University Library, Hyderabad is improving the ability of students with visual impairments in the classroom to take notes on any relevant subjects being taught by the teachers in inclusive settings by using a laptop with a screen reader, as well as to access information about their surroundings and to write exams without the assistance of a scribe. 3. Moreover, the chair is committed to the improvement in tribal children education and has recently undertaken a project that will look up the Problem Based Learning Method, an evolving strategy for educational research, to teach science concepts among tribal Children. The project has started in 2021 under FDMSE-RKMVERI, Coimbatore has financial support from Division of Educational Research (DER), National Council for Educational Research and Training (NCERT), New Delhi 4. Full-fledged research activities on physiology of human performance by the chair has come up with the establishment and opening of the research laboratories for Sports Science and Yoga at the Belur Campus from 2018. The construction of the new five-storeyed building christened "Atma-Vikas" (meaning Self development) dedicated to
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	<p>Sports Science, Yoga and Fitness hosted a number of research laboratories with scientific equipment functioning under several departments and has initiated and continuing PhD programs in the following research areas,</p> <ul style="list-style-type: none"> a) Understanding the effect mind-body techniques on motor abilities and neurocognitive functions in the students going through stress ; b) Effect of General and Specific Training on Anthropometric Profile and Cardiorespiratory Endurance of the Cricketers. c) Exploring Spatial Perception of Visually Impaired Through Auditory and Other Feedback. d) Effect of various combinations of yogic practices on physical performance of non-sport and sport persons. f) Studies on heart rate variability during various sporting activities <p>The Chair experienced difficulties in research activities on human subjects due to the outbreak of COVID-19 pandemic. In spite of the adversity, faculty members have continued to work with limited human resources whenever possible under lockdown restrictions obeying necessary precautionary measures. Dr. M. Srinivasan of Sri Ramakrishna Mission Vidyalaya Maruthi college of Physical Education conducted a questionnaire survey to understand the "Impact of COVID-19 on Physical activities" in India from more than 400 participants. Despite the unprecedented situation of pandemic the students MSc Sports Science completed dissertation under the joint cooperation of faculties of both the Department of Sports Science and Yoga (DSSY) of Belur Math Main Campus and Faculty of Disability Management & Special Education (FDMSE), Coimbatore Campus.</p> <p>During the tenure research proposals have been submitted to different funding agencies and are under process of review. The list is mentioned below :</p> <ol style="list-style-type: none"> 1. Exploring Spatial Learning Abilities with Non-Visual Cues for the Visually Impaired Persons—submitted to West Bengal-Dept. Of Science and Technology (DST) Scheme 2019 by DSSY 2. Improvement of general health, cardiovascular and metabolic risk factors in visually-impaired teenagers through yoga, meditation and
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	<p>orientation ability training. (Submitted to Sree Padmavathi Venkateswara Foundation-2019 by DSSY)</p> <p>3. Hepato-Ayurgenomics: Combining Genetics and Ayurveda for personalized diagnosis and therapy against chronic liver diseases. (Submitted to the Ministry of AYUSH (Ayurveda-Yoga-Unani-Siddha-Homeopathy) under the Govt. of India's extramural funding 2019 by DSSY)</p> <p>4. "Management of Pain in Knee Osteoarthritis by Yoga" (Submitted to AYUSH extramural funding 2019 by DSSY).</p> <p>5. Evaluation of Different Combination of Yogic Practices on Stress Management and Cognitive Performance in Elderly Population: A Randomized-Controlled Study. (Submitted to DST's Scheme called SATYAM 2020 by DSSY)</p> <p>6. A molecular and genetic study towards understanding the beneficial effects of Yoga on asthma patients. (Submitted to DST-SATYAM-2020 by DSSY)</p> <p>7. Thymic intolerance to cardiac myosin: Finding underlying cause of idiopathic dilated cardiomyopathies (IDCMs), an array of seemingly unrelated forms of cardiomyopathy in Eastern India patients. (Submitted to DST-SERB (Science and Engineering Research Board)-2020 by DSSY)</p> <p>8. Development of Accessible Resources for Improving Mathematics Learning among Children with Visual Impairment at Lower Primary Level. (Submitted to Azim Premji University Research Funding Programme 2020 by FDMSE)</p> <p>9. Digital Oracy Toolkit for Children with Intellectual Disability. (Submitted to Azim Premji University Research Funding Programme 2020 by FDMSE)</p> <p>10. Designing, Validation and Feasibility of Yoga Therapy with Task Oriented Functional Activities on Selected Physical Fitness parameters and Cognitive Functioning of Children with Spastic Cerebral Palsy. (DST- SATYAM 2020 by GAPEY)</p> <p>11. Influence of mind-body therapies with yogic approaches on parasympathetic nervous system functions among children with intellectual disability and autism. (DST- SATYAM 2020 by GAPEY)</p>
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	<p>Individualized and Combined Effects of Yoga asanas and Meditation on Selected Cardiopulmonary and Psychological Variables of Children with Intellectual Disabilities. (DST- SATYAM 2020 by GAPEY)</p> <p>12. Effect of Yoga on Lifestyle Management, Physical and Mental Fitness of Rural and Urban Women and Their Family (DST- SATYAM 2020 by GAPEY)</p> <p>13. Isolated and Combined Effects of Power Yoga with Omkar Meditation on Selected Body Weight Body Composition Biochemical Variables and Brain Rhythms of Adolescent Obese Children (DST- SATYAM 2020 by GAPEY)</p> <p>14. AYUSH intervention for Managing Pain and Improving Lifestyle in Common Musculoskeletal Disorders in Rural Population of West Bengal. (AYUSH PHI Scheme 2020 by GAPEY).</p>
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b) Conferences/Meetings

(key conferences and meetings organized by the Chair or to which its Chairholder contributed)

i) Key conferences and workshops hosted by the Chair

(In Reverse Chronological Order)

1. **19 - 20 June 2020:** National webinar on “New Horizons In Sports Sciences: Achieving High Performance” was held with invocation address by the Vice-Chancellor of the University, Swami Atmapriyananda and special lecture by Prof. Sanmuga Nathan, Sultan Idris Education University, Malaysia, followed by presentations of research topics related to the webinar theme by the participants and summarization of the events by the chair holder.
2. **7 July 2020 :** Informal meeting of the UNESCO Chairs in India was organized in collaboration with support of Prof. Madhav Nalapat and his team. This meeting was attended by Ms. Yadav and Mr. Juan Pablo.
3. **27 May 2019:** Prof. S. Nathan Jeganathan (Sultan Idris Education University of Malaysia) was invited to deliver a special lecture on “Sports and Games Training Methodology”. This programme was attended by the students of the Calcutta university and RKMVERI.
4. **15-16 March 2019:** A national level seminar on “Scientific Approach to Sports Performance and Assessment” was held and eminent personalities from sports and exercise, Dr. Ajay Bansal, Former Chief Coach, Hockey India ; Dr. Mantu Saha, Defence Institute of Physiology & Allied Sciences, DRDO, Government of India, New Delhi ; and Dr. Pralay Majumdar, Sports Authority of India, Bangalore, delivered invited special lectures. The seminar concluded with a workshop in the field of Exercise physiology and Biomechanics with participation of about forty students from different universities.

ii) Other conferences/organizational activities undertaken by the Chairholder

1. On **8 December 2020** eighth Tamil Nadu Sitting Volleyball Championship was organised by the Faculty of GAPEY at the Vidyalaya Indoor Stadium, Coimbatore. RKMV Trophy for the State Level Tournaments in Adapted sports was awarded to the Winner.
2. On **3 December 2020** the International Day of Persons with Disabilities was celebrated with various types of Inclusive sporting activities.
3. During **22- 24 October 2020** a series of webinars was organized by the Faculty of General and Adapted Physical Education on the theme “Inclusive Adapted Physical Education” (in online mode) under the leadership of Dr. R. Giridharan. Suzanna R. Dillon from Texas Women's University, Denton, USA enumerated different strategies for Physical Education Teacher Education (PETE) professionals to promote Inclusive practice on the first day. Aspects of

Classroom strategies in Physical Education (PE) under inclusive setting was elaborated by Dr. Linda Hillgenbrinck, an adapted Physical Education Specialist, Texas, USA. On the third day of the webinar an elaboration of the Indian Legislation in relation to Inclusive Physical Education and Adapted Sports was made by Sri PadminiChennapragada, of Indian Wheelchair Tennis Tour, Bangalore.

4. On **19 Oct 2020**, a webinar was hosted in the University with the theme "Swami Vivekananda's Educational ideas and the New Education Policy" to elaborate the alignment of the vision of Swami Vivekananda and the new education policy of the country. The programme was inaugurated by then the Hon'ble Education Minister, Government of India, Dr. Ramesh Pokhriyal 'Nishank'. Several eminent speakers discussed different aspects of the new education policy.
5. On **22 August 2020**, the Vivekananda Centre for Consciousness Studies and Research (VCCSR) of the university, in collaboration with Centre for Consciousness Studies, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, had organized one-day webinar on "The Four Yogas: Ancient Scriptures and Swami Vivekananda's Modern Interpretation". Eminent monastic members of Ramakrishna Mission and speakers from Krishnamacharya Yoga Mandiram, Chennai delivered special lectures. Notably, Swami Sarvapriyananda, Minister-in-Charge, Vedanta Society of New York, USA spoke on "Mundaka Upanishad's twin bird imagery and Swami Vivekananda's 'Real and the Apparent man'. Swami Atmarupananda, Resident Minister, Vedanta Society of Greater Houston, USA, discussed "Teachings on Karma Yoga in the Bhagavad-Gita and by Swami Vivekananda". Sri S.Sridharan, Trustee, senior most mentor-teacher and consultant therapist, Krishnamacharya Yoga Mandiram, Chennai: Patanjali Yoga Sutras and Swami Vivekananda's Raja Yoga. Swami Vireshananda, Editor, Prabuddha Bharata, Belur Math: "Narada Bhakti Sutras and Swami Vivekananda's lectures on Bhakti Yoga (Divine Love)". Swami Atmapriyananda, Pro-Chancellor, Ramakrishna Mission Vivekananda Educational & Research Institute, Belur Math, West Bengal, India: "Yoga-samanvaya – synthesis of the yogas as taught by Ramakrishna-Vivekananda".
6. During **21-22 February 2020** a two day National Conference on "Inclusive Education and Adapted Physical Education: Traditional and New Approaches in Developing 21st Century Skills for Students with Special Needs" was jointly organized by FDMSE and GAPEY, Ramakrishna Mission Vivekananda Educational and Research Institute, Coimbatore campus was held. Swami Nityadipanandaji Maharaj, Ramakrishna Math, Kavundampalayam, Coimbatore, delivered the Presidential address. Dr. K. Balabhaskar, Head, Adult Independent

Living, NIEPMD, Chennai, delivered the Keynote address. Swami Garishthanandaji Maharaj, Administrative Head, RKMVERI, Coimbatore campus, inaugurated Innovative Assistive Technology Stalls displayed for the benefit of delegates. Dr. M.S.Nagarajan, Senior Manager Sports, Special Olympics, Chennai delivered the valedictory address and Dr. S. Parween, Asst. Professor FDMSE proposed the vote of thanks. A total of 205-delegates including special educators, para professionals from various parts of southern India, student trainees from FDMSE and GAPEY attended the conference. 30-papers were presented on various themes related to the conference in three parallel sessions on two days.

7. During **23-24 January 2020**, European Commission ERASMUS+ Tutorial Meeting was organized and the visiting members EU delegates, Claudio Colosio, Kenesh Dzhusupov, Gert van der Laan, Triin Veber, and Anja Wipper presented various e-learning methods and held interactive sessions to introduce and clarify different issues in large scale data collection and knowledge dissemination. The project is being carried out by Prof. P.K. Nag. and the chair holder took active part in this programme.
8. During **6-11 January 2020** six students accompanied Dr. Kunal Sikder, faculty member of Department of Sports Sciences and Yoga from Belur Math University Campus visited to LNIPE, Gwalior for a five day educational tour for hand on experience on the state of art sports equipment, facilities and analytical tools in biomechanics, psychology, exercise physiology and performance analytics. They also participated in sports activities namely shooting, tennis, cricket with staff and trainees.
9. During **7 - 17 December 2019**, an educational tour for the Master of Physical Education 2nd year students was organized. Swami Divyaprajnananda Maharaj, Asst. Administrative Head, Dr. R. Giridharan, Dr. A. Sathiya Moorthy and Sri S. Rajavarman accompanied the team to the sports facilities, sports laboratories & sports assessment facilities of LakshmiBai National Institute for Physical education (LNIPE), Gwalior and Commonwealth Sports Village, Jawaharlal Nehru Multipurpose athletic sports complex , sports assessment and performance laboratories, New Delhi.
10. During **14th-18th December 2019**, the Department of Sports Science & Yoga had organized a five-day long off-campus Yoga Camp at Ramakrishna Mission Ashrama Narainpur in Chattisgarh for the residential tribal students and staff numbering 300 from Vidyapeeth and ITI. Interestingly the tribal children are from far flung remote areas of the state and majority are the first generation learners. The usefulness of Yoga as a prominent mind body technique was explained to the participants by combining both the evidence from Yogic philosophy and science through lectures by monastic and academic faculties. A very comprehensive teaching and training of yoga postures, mindfulness meditation were offered under the two running

sessions by the M.A and PG Diploma students in Yoga of the Department of Sports Science & Yoga. A pre-session was conducted by monastic faculty and a special talk on the effect of Yoga on brain development was delivered by Dr. Arkadeb Dutta, assistant professor from the Department of Sports Science & Yoga, Belur Math Campus.

11. During **14-16 November 2019**, the Faculty of Disability Management and Special Education of the University in collaboration with National Institute for Empowerment of Persons with Multiple Disabilities (Divyangjan), Chennai, had organized a 3 Day State Level Conference on “Addressing Barriers in the Environment and Universal Design”. Universal Design, Universal Design for Learning, Universal Design of Assessment, Positive Learning Environment, Technology and Persons with Disabilities, Barriers to Effective Learning and Communication, and the likes were the topics of discussion during these three days. Feedbacks were collected from the participants and certificates were distributed in the function. In total 50 special educators attended the programme.
12. During **14- 26 November, 2019** Faculty of General & Adapted Physical Education and Yoga along with Wheelchair Basketball Federation of India Jointly organize INDIAN WHEELCHAIR BASKETBALL TEAM TRAINING CAMP at Ramakrishna Mission Vidyalaya Indoor Stadium, Coimbatore. The inaugural function was held on 17th November 2019. Dr. R. Giridharan, Associate Professor and Head, Faculty of GAPEY, welcomed the gathering. Mrs. P. Madhavi, President, Wheelchair Basketball Federation of India and Captain N. Vinod Sankar, Commandant, Air Force Administration College, were introduced to the athletes who gave a motivational talk on “Elite Sports Participation and Performance by Persons with Disabilities”. Dr. R. Giridharan had assisted the Head Coach of the team, Mr. Sharad Nagane, and Mr. ThayumanaSubramaniam, Asst. Coach, in the conditioning and game specific skill training part throughout the camp.
13. On **12 September 2019**, Dronacharya Awardee Kabaddi Coach Sri Prasad Rao was invited to the university for an interaction with the students to discuss the differences between professional type of Kabaddi and the Asian games style. The students of Sports Sciences were given the opportunity to observe the professional environment of the Kabaddi match.
13. On **7 September 2019**, Dr. Tanuja Nesari, CEO, National Medicinal Plant Board and Director of All India Institute of Ayurveda, New Delhi, visited the Belur Main Campus under invitation by Hon'ble Vice Chancellor Swami Atmapriyananda Maharaj and addressed a gathering of the faculty and students of Sports Science & Yoga, followed by a group discussion on opportunities for research and funding.
14. In **November 2019**, Dr. Sourav Bhattacharjee from Washington University, St. Louis was invited to deliver a lecture at the Belur Campus. The students had an opportunity to learn about

recent developments in immunological research.

15. During **15-16 March 2019**, a National Conference on “Global Trends in Assistive Technology and Adapted Sports” –was held by the Faculties of GAPEY and FDMSE at Coimbatore. A total of 172 delegates attended the conference. Fifty delegates presented papers on various themes related to the conference in three parallel sessions on two days. This included 17 from FDMSE and 33 from GAPEY.

iii) A selection of conference presentations by the Chairholder and other colleagues
(In Reverse Chronological Order)

A. The Chair holder delivered lectures on the effects of COVID-19 on physical activity patterns of the disabled persons and also the general population. He had also Chaired various sessions of webinars organized by other universities / organizations as given below:

1. Attended the online “International Conference on Creating Sports Culture in Universities” Faculty of Physiotherapy, SGT University, Gurugram, Haryana, India and also Chaired the lecture session of Prof. Ulrich Rosen. Prof. Rosen delivered the lecture on "More Success for High Performance athletesUnderstanding Epigenetics" on May 9, 2020.
 2. Delivered a lecture on “Application of Biomechanics in Sports Performance: A COVID-19 perspective” in the webinar series organized by Physiological Society of India and Department of Sports Science, University of Calcutta, on September 13, 2020.
 3. Chaired a session on "Latest trends of Research in Yoga for Health and Immunity" on 17th June 2020. The programme was organized by Faculty and Naturopathy and Yogic Science in collaboration with Fitness India Committee. The lecture was delivered by Dr Sat Bir Singh Khalsa, Director Of Yoga Research for the Yoga Alliance and the Kundalini Research Institute, and Research Associate at the Benson Henry Institute for Mind Body Medicine, Research Affiliate of the Osher Center for Integrative Medicine, and an Assistant Professor of Medicine at Harvard Medical School.
 4. Delivered a lecture on "Framework for safe return of athletes to the playground after COVID 19 disruption in training" during a Coaches Education Programme organized jointly by Athletic Coaches Association of Bengal and Bangladesh Athletic Federation held October 4, 2020. The programme was attended by more than 150 participants from India and Bangladesh.
 5. National Web Lectures on 'Health and Fitness Awareness for the Community' was organized by School of Education, Netaji Subhas Open University, Kolkata on November 27, 2020. Prof. Asis Goswami delivered a lecture on "Exercise and health - in the present day perspective".
- B. The following special lectures were delivered by faculty members and the Chairholder during

the national seminar in the Belur Campus.

Prof. U.S. Ray - Mountaineering as a sport: emerging trends of applications of high altitude physiology;

Prof. Rupayan Bhattacharya – Principles of Biomechanics;

Prof. Asis Goswami - Technical aspects of Tests in Exercise Physiology;

Prof. Asok K Ghosh – Anaerobic threshold: Its importance in High performance sports.

C. The faculty members of FDMSE, RKMVERI, Coimbatore, Dr. S. Parween and Dr. Saumya Chandra, delivered excellent elaboration on the topic "Not All Disabilities are Visible" on the 'International Day of Persons with Disabilities'. The online programme was jointly organized at Visva-Bharati, Santiniketan, West Bengal and RKMVERI, Coimbatore campus, Tamil Nadu.

D. Webinar titled "International One-day Webinar on Consciousness Studies and Research: Ancient and Modern" was held on 30 July 2020 as a collaborative effort by Vivekananda Centre for Consciousness Studies and Research (VCCSR), School of Indian Heritage, RKMVERI and Centre for Consciousness Studies, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru. Several eminent monastic members of RKM, faculty members from NIMNAHS and the Department of Sports Science and Yoga deliberated on ancient concepts of consciousness and modern explanations that are emerging at present. The theme revolved around the vision of Swami Vivekananda. The programme included the lectures by the following persons and theme:

- i) Invocation and Inaugural address Swami Atmapriyananda, Vice Chancellor: Consciousness as discussed by Sri Ramakrishna in the Kathamrita (the Gospel of Sri Ramakrishna);
- ii) Lead Speaker on behalf of the ancient studies on Consciousness: Swami Sarvapriyananda, Minister-in-Charge, Vedanta Society of New York, USA: Consciousness Studies in ancient India: Mandukya Upanishad perspective;
- iii) Lead Speaker on behalf of the modern studies on Consciousness: Dr. Bindu M. Kutty, Professor, Department of Neurophysiology, Associate Dean of Basic Sciences and Officer In-Charge, Centre for Consciousness Studies, NIMHANS, Bengaluru: Understanding consciousness from the meditative brain : a neuroscientific perspective;
- iv) Dr. P N Ravindra, Associate Professor, Department of Neurophysiology, Centre for Consciousness Studies, NIMHANS, Bengaluru: Understanding sleep consciousness from neuroscience perspective;
- v) Swami Sarvasthananda, Minister-in-Charge, Ramakrishna Vedanta Centre, Bourne End, UK: Consciousness: Yoga perspective with special reference to Swami Vivekananda's Raja-Yoga;
- vi) Dr. Subrata Chattopadhyay, Professor of Physiology, West Bengal University of Health

Sciences: Chetana, Dharma, Darshan—Vignaner aloke (in Bengali) (Consciousness, Religion, Philosophy in the light of modern science);

vii) Dr. Arkadeb Dutta, Assistant Professor, Department of Sports Science and Yoga, RKMVERI: Consciousness and Modern Brain Research;

viii) Valedictory Address by Swami Kaleshananda, Controller of Examinations, RKMVERI: Consciousness as taught in the Bhagavad Gita;

D. Swami Atmapriyananda, Pro-Chancellor, RKMVERI, was invited to be the Chief Guest at the 'Dr Reeta Peshawaria Oration Award; function on 22-02-2021, held at National Institute for the Empowerment of Persons with Intellectual Disabilities (Divyangjan), Hyderabad.

E. Students of the Department of Sports Science & Yoga attend an International conference on "International conference on Physical Education, Yoga and Sports Science in 2020's era" organized by State Institute for Physical Education for Women in Kolkata, India and gave oral presentations on their research topic.

c) Interuniversity Exchanges/Partnerships

(principal exchanges/partnerships between the Chair and other institutions including UNESCO Chairs/UNITWIN Networks)

1. Partnerships and networking for research activities are initiated with premier Institutions and hospitals involved in the translational human research in the areas of neuropsychiatric, neurodegenerative and neuroinflammatory disorders by signing Memorandum of Understanding (MoU). One of the goals of the MoU are exploring brain science in a differently abled population with wide degrees of intellectual and motor disabilities. The details of the research areas are included in the Future Plan section of the report.

a. Memorandum of Understanding was signed between the INSTITUTE OF NEUROSCIENCES KOLKATA, 185/1 A.J.C. Bose Road, Kolkata 700017, West Bengal, India, and The School Of Biological Sciences, Ramakrishna Mission Vivekananda Educational And Research Institute, Belur Math, Howrah, West Bengal, India, (Declared by the Ministry of Human Resource Development, Government of India, as Deemed University under University Grants Commission Act, 1956) for academic cooperation in the areas of common interest in regard to research, teaching, training, publications, projects.

- b. Memorandum of Understanding was signed between the CENTRE FOR CONSCIOUSNESS STUDIES, Dept. of Neurophysiology, NATIONAL INSTITUTE OF MENTAL HEALTH AND NEUROSCIENCES (NIMHANS), Hosur Road / Marigowda Road, (Lakkasandra, Wilson Garden), Bengaluru 560029, Karnataka, India, and Vivekananda Centre For Consciousness Studies And Research, Under 'school Of Indian Heritage', Ramakrishna Mission Vivekananda Educational And Research Institute (Rkmveri), Belur Math, Howrah, West Bengal, India, (Declared by the Ministry of Human Resource Development, Government of India, as Deemed University under University Grants Commission Act, 1956) for academic cooperation in the areas of common interest in regard to research, teaching, training, publications, projects.
2. The Chair holder has taken active part in the Board of Studies meetings of School of Education, Central University of Rajasthan, Ajmer, and enhanced the introduction of credit transfer system through SWAYAM platform.
 3. The Chair took part in PGBOS meetings of MYAS Sports Science Department of University of Calcutta. Also delivered lectures to the students of the department as guest faculty.
 4. The Chair established network with the following UNESCO Chairs for various types of collaborative activities: a) Prof. Catherine Carty, UNESCO Chair Project Manager, "Transforming the Lives of People with Disabilities, their Families and Communities, Through Physical Education, Sport, Recreation and Fitness", Institute of Technology Tralee, Co Kerry, Ireland. b) Prof. Paolo Orefice, UNESCO Transdisciplinary Chair, Human Development and Culture of Peace, University of Florence, Via Battisti, 4 - 50122 Firenze, Italy. c) Prof. Carmine Gambardella, UNESCO Chair on Landscape,Cultural Heritage and Territorial Governance, Italy.
 5. Collaboration with Prof. Arkadiusz Stanula, Dept of Exercise and Sport Performance, Institute of Sport Science, The Jerzy Kukuczka Academy of Physical Education, Katowice, Poland and Dr. Subir Gupta, Faculty of Medical Sciences, The University of West Indies, Cave Hill, Barbados, led to a research publication on "Peak blood lactate concentration and its arrival time following different track running events in under-20 male track athletes", accepted for publication in the International Journal of Sports Physiology and Performance (Human Kinetics).

d) Publications/Multimedia Materials

(major publications and teaching/learning materials)

Please tick relevant fields of output and indicate volume of output:

Books

Books (edited)

Books (chapters)

[tick]

[no.]



Monographs		
Research Reports	<input checked="" type="checkbox"/>	1(PhD)+6 (M.Phil.)
Journal Articles (refereed)	<input checked="" type="checkbox"/>	6
Conference Proceedings	<input checked="" type="checkbox"/>	
Occasional Papers	<input type="checkbox"/>	
Teaching/Learning Materials	<input checked="" type="checkbox"/>	12
Multimedia Materials (CD-ROM)	<input type="checkbox"/>	
Multimedia Materials (Video)	<input checked="" type="checkbox"/>	14
Multimedia Materials (Other)	<input checked="" type="checkbox"/>	Several online lectures conducted

Give details of major publications and materials including full citations.

i) Theses

Ph.D. in Sports Science:

" On Mobility Patterns of Visually Impaired in Sporting Activities" by Triloki Prasad under the supervision of Prof. Asish Goswami, Department of Sports Science & Yoga, RKMVERI.

M.Sc. in Sports Science:

1. "Analysis of Dynamic Stability of Spatio-temporal Parameters of Gait among Individuals with Visual Impairment" by Alfa Khatun under the guidance of Dr. R Giridharan, Associate Professor & Head, GAPEY, RKMVERI.
2. "Effect of passive echolocation training on spatial cognition among amateur football players with visual impairment" by Anisha Mukherjee under the guidance of Dr. R Giridharan, Associate Professor & Head, GAPEY, RKMVERI.
3. "Effect of task-specific gross motor training programme on spatiotemporal gait profile of a child with cerebral palsy" by Debdhrita Bhattacharyya under the guidance of Dr. R Giridharan, Associate Professor & Head, GAPEY, RKMVERI.
4. "Impact of positive reinforcement by high tempo motivational music during cardio-respiratory exercise on treadmill" by Debabrata Chatterjee under the guidance of Dr. Kunal Sikder, Assistant Professor, Department of Sports Science & Yoga, RKMVERI.
5. "Evaluation of motor ability in sedentary adults trained under a short-duration balance and motor skill enhancement program" by Arpan Chattopadhyay under the guidance of Dr. Arkadeb Dutta, Assistant Professor, Department of Sports Science & Yoga, RKMVERI.
6. "Indian endurance athlete's perspective on the menstrual cycle: practices, communications, health status and the changes in perception across the phases" submitted by Tanugatri Majumder under the guidance of Øyvind B. Sandbakk, Professor, Faculty of Medicine and

Health Science, Department of Neuromedicine and Movement Science, Centre for Elite Sports Research, Norwegian University of Science and Technology (NTNU), Norway

ii) Publications

Journal Articles:

1. Prasad,T., Ghosh,S., Goswami, A. Static Balance Ability of Visually Impaired and Partially Sighted Persons on Firm and Foam Surfaces, *European Journal of Adapted Physical Activity*, 13(2), 2020. DOI: 10.5507/euj.2020.002
2. Indrajit Sarkar, Santi Ranjan Dasgupta, Kunal Sikder, and Rupayan Bhattacharya, Reverse-Relative Age Effect on motor fitness of district level handball players of West Bengal in course of talent hunting, *European Journal of Sports & Exercise Science*, 2020, 8 (3): 01-13
3. Dhiraj Dolai and Rupayan Bhattacharya, Utility of Range of Motion Measurements On The Classification of Athletes, World Academy of Science, Engineering and Technology, *International Journal of Sport and Health Sciences*, Vol:14, No:12, 2020
4. Gopinath Bhawmick Bhunia and Uday Sankar Ray, Improved aerobic capacity with progressive incorporation of breathing maneuvers in yoga training. *Journal of Advances in Sports and Physical Education*. 2020; 3(11):199-206. DOI: 10.36348/jspe.2020.v03i11.001
5. Prasad, T., Goswami, A., Ghosh, S. (2019). Walking Pattern of Sighted Volunteers with Open Eye and Closed Eye Conditions, *Journal of Disability Management and Special Education (JODYS)*.2019 ; 2(2) :1-10.
6. Roy, R., Ray Uday Sankar. Effect of yoga breathing manoeuvres (shitali and sitkari pranayama) on heat stress management. *Journal of Complementary Medicine and Research* 2021; 12(2): 182-188.

e) Cooperation with UNESCO Headquarters, Field Offices

Based on the directives to build a more informed & active network of UNESCO Chairs in India presented by the UNESCO New Delhi Director Eric Falt on a two-day consultation on the 10th & 11th December 2018 at the UNESCO New Delhi office, the chair agreed to cooperate and look into forming e-groups of UNESCO Chairs to increase knowledge sharing, networking and frequent meeting and also utilization of indigenous resources and ideas. The meeting was attended online by the Hon 'ble Vice Chancellor of RKMVERI, Swami Atmapriyananda Maharaj. Dr. N. Saravana Kumar, Joint Secretary (ICC), Ministry of Human Resource Development (MHRD) thanked UNESCO for organizing the meeting and highlighted the need to engage meaningfully with the UNESCO Chairs in strengthening the programmes and policies of MHRD.

Later in the second consultation of UNESCO Chairs in India organized on the 9th & 10th December 2019 at Maharashtra Institute of Technology in Pune, the chair holder presented a report on the activities of the Chair and had informative interaction for upholding the spirit of cooperation and promoting a value based education system.

The chair holder also participated in the UNITWIN SURVEY on " UNESCO HED Section Survey of UNITWIN/UNESCO Chair host Institutional responses to COVID 19" as requested by Peter J. Wells, Chief, Higher Education, ED/ESC/HED, UNESCO, Paris. Based on the agenda of value based education the chair holder submitted joint proposal with Dr. P.K.Nag,Professor, School of Environment & Disaster management of RKMVERI entitled " Man-making - the way forward of education development and delivery in the coming decades" for the UNESCO programme 'Futures of Education: Learning to become".

The other noteworthy activities of the chair holder are as follows:

1. Contributed in UNESCO HED Section Survey of UNITWIN/UNESCO Chair host Institutional responses to COVID 19.
3. Attended "Implications for the Global Higher Education Campus - COVID-19 education webinar #9" held on Friday, 15 May 2020 organized by UNESCO HED office.
4. Dr. Asis Goswami attended the Annual meeting of the UNESCO Chairs in India on Friday 12 March 2021 from 11.00 am - 1pm.
4. Attended the Annual meeting of the UNESCO Chairs in India on Friday 12 March 2021 from 11.00 am - 1pm.

f) Others*(any other activities to report)***Inauguration of ATMAVIKAS :**

On 31 Oct, 2018, Most Revered Srimat Swami Smaranananda Maharaj, President of Ramakrishna Math and Ramakrishna Mission, inaugurated ‘Atma-Vikas’, a five-storeyed building devoted for the educational and research purposes and equipped with modern classrooms, conference room, and laboratories, such as exercise physiology, biomechanics, training method & gymnasium.

Extracurricular Activities for imparting man-making values education:

The Chair is also devoted to encourage differently-abled children for participation in extracurricular activities and also organize lectures on the ancient Indian philosophical scriptures on ‘Karma Yoga’ (action), ‘Jnan Yoga’ (knowledge), ‘Bhakti Yoga’ (devotion) and ‘Raja Yoga’ (meditation) for growing positive psychological attributes and qualities of selflessness in service, confidence, motivation, determination, resilience important in man-making and also promoting holistic development of mind and body. Some noteworthy events during this tenure were :

1. Organized an eventful week for Holistic Welfare of the Children from 14th-20th Nov, 2018. A number of activities were undertaken by Faculty of Disability Management and Special Education (FDMSE), Coimbatore Campus, in partnership with Ramakrishna Mission Vivekananda Educational and Research Institute (RKMVERI), Belur, West Bengal and globally with ARIGATOU International, Japan. The events included in this week were a nature walk, art and craft related activities, community orientation, cultural performance, storytelling, field trip, screening wildlife movies, practical exposure to adapted yoga and unified sports, and talk on self-help skills, safety measures, health and hygiene, and environmental care. A large number of children with disabilities had participated in this programme. A two-day training programme for parents of children with disabilities was also conducted along with this programme
2. Observation of International Day of Persons with Disabilities on 8th December 2018 at GKD Auditorium, SRK Vidyalaya in Coimbatore, where Dr. Sudha, Asst. Prof., FDMSE, welcomed the gathering. Swami Bakthivrathananda, SRK Vidyalaya gave the benedictory address, Swami Divyaprajnananda Maharaj, Asst. Admin. Head, graced the occasion. The Chief guest of the programme was Mr. V.G. Jagadeesh, Web Developer & Graphic Designer, Coimbatore. Cultural and oratorical programmes were performed by children with special needs. Medals were distributed to children with disabilities who won first prize in various sports events. Persons with disabilities who are studying and working in Vidyalaya institutions were honored.

Teachers working for persons with disabilities were also honored. In total 132 persons with disabilities had participated in the event.

3. A 10-day internship to Krishnamacharya Yoga Mandiram (KYM), Chennai during December 2018 for PG Diploma students to complement the education imparted on various theoretical aspects of yoga.
4. A programme 'The Resurrection of Yoga' – Yogasanas demonstration was held at Belur Math on 12 & 17 March 2019. This programmed was also telecasted in DD Bangl and DD Urdu.
5. An event was organized by Italian Yoga Federation dedicated to their teachers and students. Swami Atmapriyananda, Vice Chancellor of RKMVERI, delivered a talk "Comments on the Bhagavad Gita" on 10 March 2019, in the Conference Room of the Embassy of India, Rome. Antonietta Rozzi visited the University and delivered a lecture in November 2018.
6. 4th International Day of Yoga was observed at the Belur Main Campus on 21 June 2018.
7. Yoga Camp in the State of Jharkhand. The students of PGDY course went to Ranchi campus of the university to conduct Yoga camps in different villages of Jharkhand state.

Awards & Prize :

Dr. K. Dhanalakshmi, received the State Award for Best Teacher for Visually Impaired by Department of Welfare of Differently abled Persons, Tamilnadu

Other Prominent Activities:

1. One of the future plan reported in last year's report was successfully established. Assistive Technology (AT) Laboratory has started its activities from this year at Faculty of Disability Management and Special Education (FDMSE). Important goal of this facility is to promote access to available AT devices, creates awareness and advocates by experiencing on usage, research and development towards empowerment in education through an inclusive environment. This would also help in employment generation and in daily living of persons with disabilities.
2. Disabled Sports Meet 2017: Faculty of GAPEY at Coimbatore campus and Sports Development Authority of Tamilnadu jointly organized Coimbatore District Level Sports and Athletic Meet for Disabled on 27.10.2017. A total of 157 persons with disabilities from 11 schools/institutions participated in various events for Physically Challenged, Visual Impairment, Hearing Impairment and Intellectually challenged. Sri H.S. Anandh, Proprietor, Lights and Lites, Coimbatore and Dr. R. Annadurai, Assistant Professor, Bharathiar University were the guests and distributed medals and certificates.
4. Leadership Training Camp 2017 – Faculty of General & Adapted Physical Education and Yoga, organised Leadership Training Camp 2017 at Sri Avinashilingam Krishi Vigyan Kendra, Vivekanandapuram from 22.10.2017 to 28.10.2017
4. The Chair was invited by the Ministry of Youth Affairs and Sports, Government of India, to

develop curriculum for different courses in the field of Sports Science and also to facilitate selection of priority areas of research to be funded by the Government.

3. Future Plans and Development Prospects:

Outline of action plan for the next biennium and short/medium and long-term development prospects.

Please do not hesitate to refer to difficulties that the Chair has experienced

(Not exceeding 300 words)

Research Projects in the Next Four Years (2021-2025):

Our future action plan has an immense outlook towards popularizing and promoting traditional contemplative Indian mind-body practices including yoga and martial arts in the Indian population for health and well-being. Our precise goals in the next four years are creating awareness on yoga and scientifically incorporating a section of our population suffering from intellectual, executive, movement-related disabilities, other socio-economically related vulnerable conditions and from lifestyle related chronic diseases. According to the Census in 2011, India has 2.21% of disabled population, of which 7.62% are children including physical, mental and sensory disabilities. This population faces difficulties in fulfilling their daily life activities due to several shortcomings in their physical, mental domains and need our constant support and assistance. Even worse is that the COVID-19 pandemic lockdown restrictions has led to a major problem in their regular developmental therapeutic routine and consultations. We will conduct few short-term projects during the period of next four years mainly focusing on understanding the effectiveness of yoga as an active goal-directed mind-body controlling practice and if it significantly works out to overcome their deficits in the neurocognitive and other related domains. It is now known from scientific literature that Yoga benefits a wide-range of mental and physical performances and promotes neuroplasticity through rigorous training in normal populations. Though little has been done on understanding if there is an equivalent effect in the brain and the mind of the children suffering from intellectual, motor-related disabilities or from children of very poor socio-economic background. So, our precise scientific research goals will be to look at the neuroanatomical association in these children with extreme socio-economic backwardness and disabilities and find out to what degree does mind-body interventions modify the influence of negative factors and promote mental, intellectual, cognitive growth and development necessary for self-sustenance. Besides expanding the interests in the areas of disability and adapted sports with inclusion of traditional Indian mind body practices and inclusion in curriculum of disabled children, we expect that the outcome of our projects in the long-term will be helpful and enriched with novel strategies and directions for large scale implementation of mind body techniques in promoting self-sustenance, self-dependence in vulnerable and disabled children of backward, rural and urban areas and including them in our sustainable economic growth equally.

Common musculoskeletal disorders (osteoarthritis, rheumatoid arthritis, fibromyalgia, gout, low back pain) related pain and disability management through a combination of ayurvedic treatment and yoga is our another future initiative. The work will commence in the rural areas of West Bengal where these disorders are very common. Chronic pain and movement related disabilities poses challenge to quality of life and can affect socioeconomic growth. It has been reported that rheumatic disease affects 15 million Indians every year from age of 30 to 50 years. Considering the growing number of people affected, it has been predicted that by 2025 India may have endemic of rheumatic diseases. These chronic diseases are not completely curable from conventional nonsteroidal anti-inflammatory drugs and may have side effects from long-term intake. Even in severe cases of rheumatic diseases sometimes expensive surgeries are common. In order to provide a low-cost yet effective treatment to the rural population where high treatment cost is unaffordable, our plan is to integrate Ayurveda along with adapted yogic practices for better lifestyle management and reducing chronic pain and disabilities. India's ancient traditional contemplative practices, Ayurveda and Yoga, can bring immense potential in offering effective treatment for a large number of low socioeconomic rural population.

Yoga as an important non-pharmacological, life-style management intervention has a well-established preventive, prophylactic and curative role in lifestyle related diseases like cardiovascular diseases and diabetes in a systematic way. Ayurveda comprises low-cost multimodal components, nutritional therapy and herbs, manual therapies, life-style counselling and yoga-based exercises. Ayurveda is potentially an ideal multimodal therapeutic system to boost its inclusion globally as an efficient traditional system for global health care under recommendation of the World Health Organization (WHO). Our future project outline is reaching to the patients and providing them effective combinatorial treatment to treat pain, improve mobility and life-style in the patients with musculoskeletal disorders and at the same time collecting comprehensive scientific data of the treatment outcome on a significant population size.

Sports Centre for the Disabled

(proposal booklet attached)

Appendix:**1) Human Resources during the reporting period**

- a) Eight full time faculty, two Monastic faculty and two adjunct faculty are serving in Department of Sports Science and Yoga, Belur Campus.
- b) Nine full time faculty / staff are serving in Faculty of Disability Management, Coimbatore campus.
- c) Ten full time faculty / staff are serving in Faculty of General and Adapted Physical Education, Coimbatore campus.

2) Financial Resources during the reporting period

<i>Please tick sources of financial contribution and specify the amount in U.S. dollars</i>	[tick]	Amount (\$)
	<input checked="" type="checkbox"/>	<u>1,16,90,000/- INR (approx.)</u>
Host Institution	<input type="checkbox"/>	
Partner Institution	<input type="checkbox"/>	
Government Body	<input checked="" type="checkbox"/>	<u>1,55,49,489 /- INR (approx.)</u>
Other Public Institution/Body (incl. Research Councils)	<input type="checkbox"/>	
UNESCO	<input type="checkbox"/>	
Other UN Agency	<input type="checkbox"/>	
IGO	<input type="checkbox"/>	
NGO	<input type="checkbox"/>	
Industry	<input type="checkbox"/>	
Other Private	<input type="checkbox"/>	—

The details of the 'Faculties' and the academic programmes under the various 'Schools' being run by the University in its various Campuses are as follows:

(1) **School of Rehabilitation and Sports Sciences:**

Disability Management and Special Education with the following Faculties:

- (i) Faculty of Disability Management and Special Education, and
- (ii) Faculty of General & Adapted Physical Education and Yoga, located at Ramakrishna Mission Centre in Coimbatore, Tamil Nadu,
- (iii) Department of 'Sports Science and Yoga' at Belur main campus, The above Faculties/Department are running M.Sc. and Ph.D. in Sports Science, M.A. and Ph.D. in Yoga, B.Ed., M.Ed., Integrated (B.Ed. +M.Ed.) in Intellectual Disability, M.Phil., and Ph.D., Integrated (M.Phil.+Ph.D.), Diploma, Advanced Diploma in Special Education,

Indian Sign Language Interpretation, Assistive Technology; B.Sc. in Physical Education, Health Education and Sports, B.P.Ed., M.P.Ed., M.Phil., and Ph.D., Diploma, PG Diploma programmes in General and Adapted Physical Education and Yoga, Special Olympics, Fitness, Yoga, Ancient Indian Sports (Kalaripayattu).

(2) **School of Agriculture and Rural Development:**

Agriculture, Rural & Tribal Development, with following Faculties:

- (i) Faculty of Agriculture, Integrated Rural Development and Management, Agricultural Bio-technology, located at Ramakrishna Mission Centre at Narendrapur, Kolkata, West Bengal, and
- (ii) Faculty of Agriculture, Integrated Rural & Tribal Development, Agricultural bio-technology, located at Ramakrishna Mission Centre at Ranchi, Jharkhand,
- (iii) Faculty of Agricultural Research and Education at Coimbatore, Tamil Nadu

The above Faculties are running M.Sc. and Ph.D. programmes in 'Agriculture and Rural Development', 'Rural Development and Management', B.Voc. in Sustainable Agriculture, 'Agriculture, Rural and Tribal Development', 'Agricultural Bio-technology'; Diploma in Organic Farming, B.Sc. in Agriculture, M.Sc. (Ag.) in Genetics & Plant Breeding, M.Sc. (Ag.) in Agronomy, PG Diploma in Food Technology, Ph.D. in Agricultural Biotechnology, Agriculture and Rural Development.

(3) **School of Indian Heritage:**

Indian Spiritual, Cultural, Scientific and Sports Heritage (including Values Education) with the programmes in the following areas:

- (i) Sanskrit Studies and Research,
- (ii) Indian Spiritual, Cultural and Scientific Heritage,
- (iii) Yoga Studies and Research,
- (iv) Classical Music with special emphasis on Dhrupad,
- (v) Values Education
- (vi) Bengali Studies and Research
- (vii) Philosophical Studies (Western and Eastern, with special emphasis on Vedanta, Yoga, Sankhya and Ramakrishna-Vivekananda philosophy)

The programmes being run in the above areas include: Sanskrit Studies and Research (Integrated 5-year M.A. programme completely taught in Sanskrit medium, Ph.D. in Sanskrit with special reference to Vedanta and Vyakarana), Research in Philosophy and Bengali (Ph.D. in selected areas in these subjects, focussing on Ramakrishna-Vivekananda, various School of Indian Philosophy, that is, *darshanas*), Diploma and Certificate Courses in Spiritual Heritage of India like the Upanishads, Bhagavad-Gita, Yoga Sutras of Patanjali, Srimad-

Bhagavatam, Ramayana, Mahabharata, Ramakrishna-Vivekananda literature, and other ancient Sanskrit scriptures.

Research activities in philosophy and Sanskrit has been greatly facilitated by the creation of '**Swami Abhedananda Chair**' by the **Ministry of Culture, Govt. of India with a permanent Corpus Fund.**

(4) **School of Mathematical Sciences:**

Fundamental Science Education and Research with the following Departments:

- (i) Department of Mathematics,
- (ii) Department of Computer Science and Applications (including Data Science),
- (iii) Department of Physics.

These Departments are located at the Belur main campus, and at Coimbatore Centre and are running M.Sc., M.Phil., Ph.D. programmes in Physics, Mathematics, Computer Science and Applications and Big Data Analytics.

It may be recalled in this connection that it was **Swami Vivekananda who inspired Sir Jamshedji Tata to start an Institute in India for fundamental science education and research** during their travel together in the same ship to Chicago in 1893. The result of this dialogue between these two great minds and great sons of India is the present 'Indian Institute of Science' at Bengaluru, which is the pride of Indian science, a globally acknowledged premier Institute devoted to research and education in fundamental sciences.

(5) **School of Environment and Disaster Management:**

M.Sc. and Ph.D. programmes in 'Environment and Disaster Management' located at Ramakrishna Mission Centre at Narendrapur, Kolkata, West Bengal. This programme is being supported by **European Commission** in a collaborative venture through a Memorandum of Understanding (MoU). The **Government of West Bengal has created a Swami Vivekananda Chair in 'Environment and Disaster Management'** to reinforce and strengthen the various programmes in this important area.

(6) **School of Biological Sciences:**

The Department of Biomedical Science and Technology under this School conducts M.Sc. and Ph.D. programmes in Medical Biotechnology, Microbiology, etc. Integrated 5-year M.Sc. (3-year B.Sc. Hons + 2-year M.Sc.) programmes in the following two important areas, wherein trained personnel are the urgent need of the hour, are being planned and will be started from July-August

2022: (i) Medical Laboratory Science Technology, (ii) Medical Critical Care Science and Technology. The venues of these programmes are the Narendrapur Campus and Ramakrishna Mission Sevapratishtan Campus at Kolkata. The field of Biomedical Science and Technology, which is becoming increasingly important on account of the Covid-19 pandemic, is now the focus of special attention of our Deemed University. The specialized areas in this field which are emerging and exciting are: medical laboratory technology, critical care science and technology, immunology, digital biology and bioinformatics, digital image analysis, etc. Academic programmes (postgraduate and research) in these areas are being started from the academic year 2022-2023.

As is well known, Swami Vivekananda wanted a harmonious blend of the *Sanatana Bharatiya Jnana Parampara* (Ancient Indian Knowledge Tradition, its spiritual wisdom and remarkable insights into the whole spectrum of human knowledge) with the modern scientific and technological as well as philosophical and mathematical knowledge of the Western world. RKMVERI Deemed University established in his hallowed name is striving to achieve this unique blend by setting up the Schools of Indian Heritage, Mathematical Sciences, Rehabilitation and Sports Sciences, Environment and Disaster Management, Agriculture and Rural Development and Biological Sciences.

In addition to the above, RKMVERI has stated the following two new Centres under the School of Indian Heritage, namely:

- (1) **VIVEKA-VYASA** (**Vivekananda Vedanta-Yoga-Adhyayana-Samshodhana-Alaya**), that is, Vivekananda Centre for Study and Research in Vedanta and Yoga), with emphasis on research and publications on Indian philosophy cross-referenced with Western Philosophy, Yoga psychology emerging areas in philosophy like Care Ethics, Humanistic Ethics, Environmental Ethics, Earth as the Mother, etc.
- (2) **VIVEKA-CHATAK** (**Vivekananda Chaitanya Tattwa Anusandhan Kendra**), that is, Vivekananda Centre for Consciousness Research with emphasis on the theoretical study of the ancient Vedanta and Yoga texts relating to Consciousness or Chaitanya as well as exploration through scientific experimentation on the veracity of some of the claims made in these ancient texts.

The activities of these two Centres have been largely facilitated by the '**Swami Abhedananda Chair' established at the University by the Government of India, through its Ministry of Culture**', with a permanent corpus fund. The Chairholder, besides conducting research activities, is also actively involved in preparing books/booklets and papers for publication in various national and international journals.

Two journals, one at the level of the research scholars and another at the level of undergraduate and postgraduate students, fully in Sanskrit, called **PRAJNALOKA** and **PRATIBHALOKA** respectively are published by the Department of Sanskrit and Philosophy under the School of Indian Heritage. One more journal called **PRAJNANAM** which is presently tri-lingual (Sanskrit, Bengali and English) caters to students of various Colleges and University students.

Under the auspices of the 'Swami Abhedananda Chair', the Department of Sanskrit and Philosophy runs three courses on *Samskrita Bhasha Praveshika* for the promotion of Sanskrit among the general public as well as the College and University students at three levels: (i) Preliminary, (ii) Intermediate and (iii) Advanced. Intensive research work on Indian Philosophy (the Six Systems, *shad-dharshana*) with special emphasis on the various aspects of Vedanta, Samkhya and Vyakarana as well as Ramakrishna-Vivekananda philosophy based on the classic texts like Sri Sri Ramakrishna Kathamrita (The Gospel of Sri Ramakrishna), Sri Sri Ramakrishna Lilaprasanga (Sri Ramakrishna and his divine play or Sri Ramakrishna, the Great Master), the Complete Works of Swami Vivekananda and Swami Abhedananda, etc. A brief report of the research work in this regard including the M.Phil./Ph.D. theses completed and in progress is given below:

RESEARCH ON VEDANTA AND RAMAKRISHNA-VIVEKANADA PHILOSOPHY UNDERTAKEN/COMPLETED BY THE Ph.D./M.Phil. SCHOLARS OF THE DEPARTMENT OF SANSKRIT AND PHILOSOPHY DURING THE PAST EIGHT YEARS—A SUMMARY

No. of M.Phil. theses: 14

List of themes of these M.Phil. theses:

- (1) Ashtavakra Gita—a critical study vis-à-vis Bhagavad-Gita
 - (2) Shaiva Siddhanta philosophy
 - (3) Comparative study of Shankara Bhashya and Vedanta-Desika Bhashya on the Ishavasya Upanishad
 - (4) Mukti (jivanmukti, videhamukti, kramamukti) according to Shankara Bhashya on the Chhandogya Upanishad
 - (5) Ramakrishna-Vivekananda Vedanta (called Vijnana Vedanta)
 - (6) Vritti-prayojana according to Advaita Vedanta
 - (7) Swami Shankarananda's Dipika on Kailvalya Upanishad
 - (8) Sri Shankaracharya's Sadhana-panchaka—a critical study
 - (9) Arthapatti-viveka according to Advaita Vedanta
 - (10) Navya-Nyaya in Madhusudana Saraswati's Advaita Siddhi
 - (11) Special qualities of a Mumukshu as described in Uddhava Gita
 - (12) Saccidanandendra Saraswati's (1880-1975) new concepts in Advaita Vedanta
-

- (13) Analysis of the Samkhya Yoga of Bhagavad-Gita according to Nilakantha Dikshita's commentary, Bharata-bhava-dipa, on the Mahabharata
- (14) Critical and comparative analysis of the commentaries of Shankara, Ramanuja and Baladeva Vidyabhushana on the second chapter of the Bhagavad-Gita

No. of Ph.D. theses: 11

List of themes of these Ph.D. theses:

- (1) A critical and comparative study of the first Shatka of the Bhagavad-Gita according to Shankara, Ramanuja and Baladeva
- (2) Advaita Bhavana in Rabindra Sangeet
- (3) A Bengali Translation and Critical Analysis of Amṛtataraṅginī Commentary on the Bhagavad Gītā by Puruṣottamācārya
- (4) A critical study of the first Shakta of the Bhagavad-Gita based on Ramakantha's Saiva Bhashya and comparison with other Shaiva commentaries on the Gita
- (5) Veda-bhashya of Sri Sayanacharya—a critical study
- (6) Similes used by Sri Shankaracharya in his Brahma Sutra Bhashya—a critical study
- (7) The verses of the Bhagavad-Gita quoted in Sri Sri Ramakrishna Kathamrita by Sri Mahendra Nath Gupta—a critical study based on the Gita Bhashyas of Shankara, Ramanuja, Baladeva
- (8) Study of the Upanishads based on Sri Ramakrishna's harmonizing and non-sectarian interpretative framework
- (9) A comparative critical study of the commentaries on the Chatussutri of Brahma Sutras according to Advaita and Achintya Bhedaabheda schools of Vedanta
- (10) A comparative critical study of the commentaries of Shankaracharya and Sayanacharya on Ishavasya and Taittiriya Upanishads
- (11) The meaning of the Mahavakyas as reflected in the various Gitas found in the Bhagavata Mahapurana

List of dissertations on Vedanta and Ramakrishna-Vivekananda philosophy by M.A. students: 29

- (1) Study of the selected portions from Sri Shankaracharya's Prashnottara Malika
- (2) Understanding Sri Shankaracharya's Atmabodha
- (3) Meaning of injunction (vidhi) in Vedanta
- (4) Sri Ramakrishna's concepts of Nitya and Lila—a critical study
- (5) Uniqueness of the Prasthana-traya among the Advaita scriptures
- (6) Discussion on Sacchidananda in Sri Shankaracharya's Soundarya Lahari hymn
- (7) Discussion on Sakara and Nirakara in Advaita scriptures in the light of Sri Ramakrishna's teachings

- (8) Thoughts on Bhakti according to Sri Sampradaya of Ramanujacharya
- (9) Arthapatti-pramana according to Advaita Vedanta
- (10) Bhakti Yoga in the light of Ramarayakavi's Bhashyarkaprakasha
- (11) Compilation of the Shruti passages determining six-fold tatparya
- (12) Brahmananda valli of Taittiriya Upanishad—a study
- (13) A study of the Parthiva prakarana in Upadesha Sahasri of Sri Shankaracharya
- (14) Famous Loukika Nyayas found in the Nyaya-prasthana Bhashya
- (15) Jiva-bheda (difference in Jivas) according to Sri Ramakrishna
- (16) The strength of Pratyaksha in Advaita Siddhi
- (17) Analysis of the Apourusheyatva of the Vedas
- (18) Analysis of Kshetra and Khetrajna according to the Bhagavad-Gita
- (19) 'Brahma-satyam, Jaganmithya' according to Sri Ramakrishna
- (20) Analytical study of Aparokshanubhuti of Sri Shankaracharya
- (21) The nature of Moksha and Moksha Upaya according to Sri Shankaracharya and Sri Ramanujacharya
- (22) Sri Ramakrishna's unique concepts of Jnana-Vijnana-Bhavamukha
- (23) A comparative study of the conclusions of Purnaprajna and Shankara in the Brahma Sutra, janmadi etc.
- (24) Tattwamasi mahavakya vichara in Upadesha Sahasri of Sri Shankaracharya
- (25) Discussion on the Atmananda Prakarana in Vidyaranya's Panchadashi
- (26) Discussion on the Mithyatva Lakshana in Advaita Siddhi of Madhusudana Sarasvati
- (27) Discussion on Pratyaksha Pramana according to Advaita Vedanta
- (28) Discussion on the Yogananda Prakarana in Vidyaranya's Panchadashi
- (29) A critical study of the third chapter of the Bhagavad-Gita

Seminars, Workshops etc., on Vedanta, Sankhya, Mimamsa, etc.

- (1) International Workshop on "Advaitasiddhiḥ of Madhusūdana-sarasvatī" in July-Aug 2022
- (2) International Workshop on Sāṃkhyakārikā in Jan-Feb 2022
- (3) International Workshop on Mīmāṃsā text Arthasaṅgrahaḥ of Laugākṣi-Bhāskara
- (4) Veda-Vedanta Saptaha (Weeklong celebration of Veda-Vedanta) from 29 February to 5 March, 2016, comprising a 3-day National Seminar on the Three Major Schools of Vedanta (Advaita, Vishistadvaita, Dvaita). Key-note address: Śāṅkara-rāmānuja-bhāṣya-svārasyam.
- (5) Lectures delivered on various abstruse topics of Advaita Vedanta: Pancadaśī, Mahāvākye samsargaviśiṣṭavākyārthaḥ katham na, Adhyāropāpavādau, Śāṅkaravedānte Yogaśātrasyopayagaḥ, Suṣuptau Avidyā, Tattvamasivākyārthavicāre pūrvācāryasaranīm prati kaścitpūrvapakṣaḥ.
- (6) Besides seminars and symposia conducted at periodic intervals, the Department of Sanskrit has a Weekly Colloquium called *manasollasah*

wherein the Sanskrit Department students of all the five years of Integrated M.A. and also Ph.D. scholars participate to get trained in extempore speech in Sanskrit, composition of poetry on the spur of the moment on various themes given to them, reciting their self-composed poems and presenting their research papers, etc.

Consolidated list of Workshops conducted from 2015 to 2022:

- (1) International Workshop Series 6, 'Close Reading of the śāstras (śravaṇa-manana)' in ***Advaita-siddhiḥ of Madhusūdana-sarasvatī***--5 July to 13 August 2022
- (2) International Workshop Series 5, 'Close Reading of the śāstras (śravaṇa-manana)' in ***Dhātvartha-nirṇayah in Vaiyākaraṇa-Bhūṣaṇasāra of Kauṇḍa-Bhaṭṭa***--15 February to 15 March 2022
- (3) International Workshop Series 4, 'Close Reading of the śāstras (śravaṇa-manana)' in ***Kriyā-svarūpa in Pāṇiniya-Vyākaraṇa***--17 January to 5 February 2022
- (4) International Workshop Series 3, 'Close Reading of the śāstras (śravaṇa-manana)' in ***Sāṃkhya-kārikā of Iśvara-kṛṣṇa***--3 January to 3 February 2022
- (5) International Workshop Series 2, 'Close Reading of the śāstras (śravaṇa-manana)' in ***Vyākaraṇa-śatakoṭih in the aphorism Arthavada-dhātura-pratyayaḥ Prātiprādikam***--30 Dec 2021 to 13 Jan 2022
- (6) International Workshop Series 1, *Close Reading of the śāstras (śravaṇa-manana) in the Mīmāṃsā text Artha-saṅgrahaḥ of Laugākṣi-Bhāskara*--2 to 28 August 2021
- (7) National Workshop in ***Vyākaraṇa Mahābhāṣya of Patañjali (Ekaśeṣāhnikam)***-- 23 to 29 Feb 2020
- (8) National Workshop in ***Vyākaraṇa Mahābhāṣya of Patañjali (Samarthā-hnikam)***--5 to 12 Jan 2019
- (9) National Workshop in ***Navya-Nyaya***--16 to 19 Aug 2017
- (10) ***Motivational Workshop for Sanskrit Teachers*** in collaboration with Samskrita Bharati--02 April 2017
- (11) National Workshop in ***Manuscriptology***--21 Nov to 6 Dec 2016
- (12) Workshop in ***Manuscriptology*** in collaboration with Sri Venkateswara Vedic University, Tirupati--29 Mar to 13 April 2016
- (13) National Workshop in ***Translation into Sanskrit***--2 Nov to 6 Nov 2015

RESEARCH ACTIVITIES ON RAMAKRISHNA-VIVEKANANDA PHILOSOPHY VIS-À-VIS WESTERN PHILOSOPHICAL THOUGHT UNDER THE 'SWAMI ABHEDANANDA CHAIR' FOR THE PERIOD FROM 1 DECEMBER 2021 TO 15 JULY 2022

INDIVIDUAL RESEARCH OF THE CHAIR PROFESSOR, Dr PAROMITA ROY:

A. Research Articles in Philosophy and Care Ethics

1. Upanishadic thought, Swami Vivekananda's educational philosophy vis-à-vis the concept of 'Intellectual Midwifery' of Socrates
2. Ethics of Care as viewed from the perspective of inter-connectedness and inter-relatedness—Buddhistic concept of *pratitya-samutpada* and modern cell biological concepts
3. Swami Vivekananda's Atman-centric Ethics without reference to religion

B. Books (original and translation)

1. The Concept of 'One Health'—Philosophical Underpinnings
2. The place of prayer in Jainism and Buddhism
3. Translation into Bengali: "The Soul of Man" by Swami Ramakrishnananda
4. Translation into Bengali: "Classical Indian Philosophies: Their Synthesis in the Philosophy of Sri Ramakrishna"

Design of General Ethics Syllabus and study materials for the Ph.D. scholars

A comprehensive syllabus is being prepared incorporating the important ideas and theories in Western Ethics and putting them in perspective in the framework of the Indian Wisdom tradition (Bharatiya Jnana Parampara) and also to mark the subtle differences as well as similarities in the Western and Indian understanding of Ethics.

Design of Research methodology syllabus for the Ph.D. scholars

A comprehensive syllabus is being prepared incorporating the different research methodologies, both Western and Eastern. The philosophical concepts of the Western philosophers, such as the Socrates' midwifery, Cartesian method of Rene Desacartes, Immanuel Kant's Transcendental Dialectic, etc., are placed alongside the research methodology followed in the Upanishads such as Prashna, Taittiriya and the Brhadaranyaka Upanishads wherein the researcher, the seeker of Truth is gradually led to deeper and deeper realms of thought through an open-ended exploration into the inner Consciousness. It is also shown how the understanding of "Anubandha-catushtaya" forms the key in the research methodology developed by the ancient Indian commentators and researchers into the Shastras.

C. Research on Swami Vivekananda's Four Yogas

E.1. Paper on "Swami Vivekananda's Four Yogas—an overview and their synthesis, a unique contribution of Swami Vivekananda for

the modern age” presented by Dr.Paromita Roy, the ‘Swami Abhedananda Chairholder’ at a recent Webinar to mark the International Day of Yoga on 21 June 2022.

RESEARCH UNDER THE GUIDANCE/SUPERVISION OF THE CHAIR PROFESSOR, Dr PAROMITA ROY:

E.2. Research Projects undertaken by two Ph.D. scholars on the ‘Four Yogas of Swami Vivekananda’ under the supervision/guidance of the ‘Swami Abhedananda Chair’ Professor, Dr.Paromita Roy:

- E.2.1. Swamiji’s Exposition of Karma Yoga vis-à-vis Western Philosophical thought (Socrates, Kant, Bradley, Thomas Hobbes, Henry Sidgwick)
- E.2.2. Swamiji’s exposition of Jnana Yoga vis-à-vis Western Philosophical thought (Socrates, ‘Allegory of the Cave’ in Plato’s Philosophy, World of Reality and the World of sensible particulars, British philosopher Francis Herbert Bradley and his seminal work entitled *Appearance and Reality*)
- E.2.3. Swamiji’s unique exposition of Raja Yoga and Patanjali Yoga Sutras
- E.2.4. Swamiji’s exposition of the Bhakti Yoga and comparison with Narada Bhakti Sutras

F. Research Project undertaken on Vedanta by the Ph.D. scholar, Smt. Subarna Paul, under the ‘Swami Abhedananda Chair’

Translation into Sanskrit of *Introduction to Vedanta Darsana* (forming part of the Bengali discusses in simple and lucid language the twelve schools of Vedanta)

G. Seminars/symposia—Paper presentation by research Scholars

G.1.. “Swami Vivekananda’s Karma Yoga vis-à-vis Western philosophical thought” by Smt. Subarna Paul—presentation made at a webinar on 19 June 2022

G.2. “Swami Vivekananda’s Bhakti Yoga discussed in the light of the Christian Mystics’ Love of God” by Smt. Dhriti Rani Saha—presentation made at a webinar on 20 June 2022 (three Christian mystics chosen among the innumerable mystics: St. Francis of Assisi, Joan of Arc, and Teresa of Avila)

RESEARCH PROJECTS IN PROGRESS

A. Individual Research Activity by the ‘Swami Abhedananda Chair’ Professor, Dr Paromita Roy

A.1. Research Articles:

1. Vasudaiva Kutumbakam: Solidarity in hours of crisis with reference to the Philosophy of Swami Vivekananda
2. Yoga samanvaya of Swami Vivekananda

A.2. Books/Booklets

1. Prayer in Sikhism
2. Prayer in Islam
3. Prayer in Judaism and Christianity

B. Under the Supervision/Guidance of the Chair Professor: prepared by the research scholars:

1. Comprehensive Book containing references to the Four Yogas and Yoga Samanvaya in *Sri Sri Ramakrishna Kathamrita* (both in original Bengali and the English translation, *The Gospel of Sri Ramakrishna*)
 2. Comprehensive Book incorporating comparative analysis of the Four Yogas of Swami Vivekananda and the Four Yogas of Swami Abhedananda
-

MISCELLANEOUS RESEARCH PROJECTS IN PROGRESS

Setting up of a Departmental research library with all the essential texts, rare materials, etc., in Western philosophy, Indian philosophy, religion, Ramakrishna-Vivekananda literature etc., for easy and ready access any time of the day.

RESEARCH IN BIOLOGICAL SCIENCES

To promote research in the field of Biological Sciences, a new Centre called JIVAN has been started. A brief description of JIVAN is given in the Note below:

JIVAN (Jiva-Vijnan-Anweshan-Niketan)—Centre for Research in Biological Sciences

In collaboration with Ramakrishna Mission Seva Pratishthan

JIVAN is a research initiative of the School of Biological Sciences of RKMVERI Deemed University, in collaboration with Ramakrishna Mission Sevapratishtan (a 600-bed General Hospital nearly 90 years old located in Kolkata). Its objective is to bring together biological scientists with vast research experience in laboratories of reputed Institutes and the medical doctors working in the field in order to create a synergy, taking on board eminent statisticians and computer scientists also to explore the fascinating emerging areas like the use of digital image analysis and artificial intelligence techniques in the medical field. The following **Five Working Groups** in the various important areas of Biological Sciences are actively engaged in working out the plans and programmes for research, teaching-training, extension services under **JIVAN**:

- 1. Microbiology**
- 2. Cardiology & Metabolic Disorder**
- 3. Hematology & Hemato-Oncology**
- 4. Neuroscience**
- 5. Medical Statistics and Digital Data Analytics**

Each of the above Groups has, on an average, 5 persons who are biological scientists who are teaching and research faculty of the University as well as practising medical doctors interested in medical and biological research. The Statistics Group comprises mathematicians and statisticians from the reputed Indian Statistical Institute, Kolkata, and some of them are computer scientists engaged in research in medical image analysis.

Recent Developments and Future Plans for the School of Biological Sciences:

During the last year (2021), the raging Covid-19 pandemic notwithstanding, the School of Biological Sciences, under its Department of Biomedical Science and Technology, set up a Research Unit, mainly for Translational Research benefiting the common man (called 'lab to bedside' research) called JIVAN (Jiva-Vijnan-Anweshan-Niketan), Centre for Research in Biological Sciences. As mentioned already, JIVAN is a unique synergy of basic biological scientists on the one hand and medical doctors/clinicians on the hand and has 5 vibrant working groups on various fields of biomedical research. We have also established state-of-art cell culture facility during the last academic year. Four new research faculty members have been recruited: Dr. Arnab Basu, Dr. Pushkar Malakar, Dr. Brahmachari Manash Deep and Dr. Dipak Manna, of whom two hold the prestigious Ramalingaswamy Fellowship of the Dept. of Biotechnology and one the Ramanujan Fellowship of the Dept. of Science and Technology, Govt. of India. A total of six research scholars are presently working in the department and Brahmachari Somnath has submitted his thesis on 'investigating drug resistance in Multiple myeloma' for the award of the degree of Ph.D. To our knowledge, ours is the only University/Institute in the whole country wherein Medical Biotechnology and Agricultural Biotechnology teaching and research activities are being conducted under a single roof. We have received research funding from various organizations like, KolkataGives, Kolkata; Karuna Trust, Bengaluru (from Padma Shri Dr.H. Sudarshan), and Dr. Manish Nandi, a doctor based in Texas, USA. Within a short span of about one year and a half, a total of 7 research papers were published in internationally renowned journals and 2 more papers are in the pipeline. The School of Biological Sciences has signed **Memoranda of Understanding (MoUs) with other research institutions for multidisciplinary research:**

-
- (1) Ramakrishna Mission Seva Pratishthan (Vivekananda Postgraduate and Research Institute of Medical Sciences), Kolkata;
 - (2) University of Calcutta; Institute of Neuroscience, Kolkata (INK);
 - (3) Tata Medical Centre (TMC);

(4) Chittaranjan National Cancer Institute (CNCI), Kolkata.

Agricultural Biotechnology group of teachers and research, in existence for nearly a decade since the very inception, are working in collaboration with the Biotechnology group. In last two years, nearly 40% of the students who successfully completed their M.Sc. programme, are pursuing their Ph.D. abroad (in the USA and Europe) and in renowned Institutes in India (IITs, IISERs, CSIR, and DAE research institutes). Students are well placed in the agro-based industries and also in academia. Some of our students have also opened their start-ups in various agricultural domains and are gaining paced success over time. Faculties are actively engaged in research, receiving national-level competitive grants and showcasing their research in high-impact journal publications (8 publications in 2021-2022 academic year). We have established a fully functional Organic Farming Centre and Quality Testing Laboratory which are engaged in extension activities for the beneficiaries and farmers apart from research. A fully functional tissue culture centre is also in place, engaged in teaching and research. We have also received 5 research projects from various agencies like ICAR, DBT-SERB, DBT, West Bengal State Medicinal Plant Board and UGC-DAE CSR.

Academic Programmes being started during the current academic year 2022-2023:

We have initiated process for upgrading our syllabus in Medical Biotechnology to include facets of Drug development, Entrepreneurship and Nanotechnology. We also envision including vaccine development as a unit in the new syllabus which has been recently updated in July 2022. The following two programmes, relevant and urgent to meet the emerging needs are being started from the current academic year 2022-2023, under the Department Biomedical Sciences and Technology in the School of Biological Sciences:

-
- (1) M.Sc. in Critical Care Science and Technology,**
 - (2) M.Sc. Laboratory Science and Technology**

Both these courses are planned to create a talent pool for addressing the niche requirement of specialists in critical care and laboratory sciences. A MoU in this regard is being signed with the Peerless Hospital & BK Roy Research Institute, Kolkata. These programmes will generate employment in the urgently needed areas of Critical Care and Laboratory Techniques. Four different hospitals with expertise in various specializations like pulmo-cardiology, neurology, oncology (cancer biology) with whom MoU has already been signed will provide all advanced facilities in these specialized critical care. We are also relentless pursuing the opportunities for grants from the Departments of Science & Technology, and Biotechnology, Govt. of India for augmenting and reinforcing our research infrastructure and facilities.

In Agricultural Biotechnology, the already existing Centre in Organic Farming is being developed into a Centre of Excellence in Organic Farming System Research with a focus on plant microbiome projects to conduct fundamental bio-molecular research in the areas of agricultural biotechnology, which will be provide facilities for teaching and research with state-of-the-art plant

biotechnology facility. Further, a house of sophisticated high-end instrumentation facilities to conduct research on specific areas of plant molecular biology, agricultural microbiology, biotechnology of medicinal plants, etc. is on the cards. The University has also brainstorming on starting a course of Integrated B.Sc.-M.Sc. programme in Biotechnology with specializations in either plant/agricultural biotechnology or medical biotechnology in the last three semesters through a synergy between the School of Agriculture & Rural Development and the School of Biological Sciences.

CREATING A RESEARCH ECOSYSTEM—SETTING UP A RESEARCH & DEVELOPMENT CELL AS PER THE UGC GUIDELINES IN THIS REGARD

It may be mentioned in this context that in tune with and in compliance of the National Education Policy (NEP) 2020 and as per the elaborate UGC Guidelines in this regard, the University has set up a Research & Development (R & D) strictly following the essential points delineated in the UGC's Booklet on the raison d'être for setting up such a Cell (excerpts from the 'Foreword' by the Hon'ble Chairman, University Grants Commission to the Booklet giving the Guidelines for the setting up of an R & D Cell in Higher Education Institutions): "National Education Policy (NEP) 2020 envisages the promotion of quality research within the Higher Education System. Research, innovation and development are important aspects to enhance quality education by the Higher Education Institutions (HEIs). Societal challenges of our country can only be addressed by having a strong and vibrant higher education ecosystem with an emphasis on research, innovation and technology development. The integration of Research, Innovation and Technology Development is the foundation of Atma-Nirbhar Bharat (self-reliant India). I am delighted to present the 'Guidelines for Establishment of Research and Development Cell (RDC) in HEIs'. The establishment of RDC in HEIs will enable attainment of targets of Atma-Nirbhar Bharat and is expected to play a pivotal role in catalyzing research culture mandated in NEP 2020. The purpose of these guidelines is to put in place a robust mechanism for developing and strengthening the research ecosystem within HEIs, aligned with the provisions of NEP-2020. The essential elements of such an ecosystem, viz., generation of knowledge and facilitation of research, innovation and technology development for industrial & societal benefits, are addressed by human resource, intellectual capital, governance and financial resources, information management system, research promotion & guidance, Integrity and ethics, capacity building and research monitoring. The Guidelines are to create a conducive environment for enhanced research productivity; to encourage collaboration across industry, government, community-based organizations, and agencies at the local, national, and international levels and to facilitate greater access to research through mobilization of resources and funding. The establishment of RDC in HEIs will help in creating new knowledge, creating a research ecosystem for reliable, impactful, and sustained research output and facilitating intellectual growth that would promote quality research and contribute meaningfully towards the goal of a self-reliant India."

DEVELOPMENT OF ‘ENTERPRISE RESOURCE PLANNING (ERP)’ FOR EFFECTIVE GOVERNANCE AND MANAGEMENT

It is now common knowledge that the implementation of the ERP in educational institutions in general and higher education institutions in particular has become the *sine qua non* of effective, efficient and excellent governance. Its benefits, which can hardly be overemphasized are now well known and flow in multiple channels to cover all the stakeholders. Some of them are listed below.

Enterprise Resource Planning (ERP) is the key software for institutions which helps them to manage and control their operations and all activities regardless of their periodicity. This software type is most useful when institutions have a lot of data points from various channels and need distilled information to take key decisions and implement correction measures. Higher education institutions deal with a lot of data pertaining to admissions, fees, online classes, assessments, final exams, grading, and certifications which require a level of automation to eliminate manual errors. Processing and storing all this information and easy retrieval makes ERP indispensable for these institutions. ERP software uses vary per stakeholder and some of the tangible benefits of such an integrated system are:

Educator/Teacher:

In today's world, where all teaching, learning, and grading are online, the ERP could act as a facilitator for the teacher, replacing most physical tasks with the clicks of buttons. Sharing lesson plans, course materials, and grades are easier with an ERP platform. Most data captured from students are recorded for future reference and the risks of human error are reduced to a minimum. Additionally, educators can access specific student data across departments that will help them understand the student journey better and provide personalized learning experiences. As educators, the onus of delivering lessons per the curriculum is made easier with an ERP platform and tracking progress is faster. The other uses of an ERP to the educator are:

-
- ✓ Automates repetitive tasks
 - ✓ Eases submissions and grading
 - ✓ Allows for better collaboration with students and other departments
 - ✓ Easy uploads of course materials
 - ✓ Access to a repository of teacher trainings
-

Student:

If used well, a good ERP solution eases the learning process for the student. The shift to virtual classrooms has not been easy for some students, even though they are considered to be digital natives. With automated assignment reminders, lesson query resolutions, submissions, and grades, the process of interaction with the teachers is made easy. Access to individual portals for

notifications, information, updates, download/upload assignments, timetable, exam notifications, fee reminders and more, makes for easier task management and completion. Whether it is institution policies or learning guides, students can also access information whenever and wherever they choose to. This makes the learning process a seamless and streamlined experience. The other uses of an ERP to the student are:

- ✓ Anytime, anywhere access to updated course materials
 - ✓ Paced learning
 - ✓ Faster resolution of lesson queries
 - ✓ Peer-to-peer learning
 - ✓ Progress updates in a single view
-

Educational Institutions:

An ERP can bring in savings in costs and time for the management of an institution. By interconnecting all functional and operational departments in the institution, data regarding students, faculty and administration are stored and retrieved on demand. Some platforms provide real-time analytics on cost leakages across departments which might hinder performance and result in assets being used sub-optimally. An ERP software for educational institutes also enables them to manage their online brand presence, faculty reviews, and student progress. Having this organized data handy is most beneficial when it comes to making course corrections related to a particular department or process. Administrative tasks can be automated and more focus can be channeled into the quality of education. ERPs also come with data security which is paramount to keep student and parent trust and augment brand perception in today's age. The chances of information leakages are less when compared to on-premise solutions or physical maintenance of documentation.

The other uses of an ERP to the institution are:

- ✓ Online brand management
 - ✓ Automated marketing activities
 - ✓ Smoother admissions processes
 - ✓ Automated fee collections
 - ✓ Faster comparison of department metrics
-

A robust ERP must be efficiently used to its maximum capacity in order to be able to deliver the expected outcomes. An important factor that educational institutions need to keep in mind while implementing an ERP solution is its scalability. As more students opt for online education, software must be ready to hold and integrate the influx of new data with old records. Newer data points are generated almost on a daily basis with regard to student leads and marketing activities and how well an institution captures and makes sense of it will depend on how good the ERP solution is. With multiple ERP offerings in the market tailored for educational institution use, appropriate diligence must be carried out to pick the one that suits all stakeholder requirements. Pre-pandemic, investments into digital infrastructure such as an ERP were considered useful but optional, but no more—it is now not only essential, but a *sine qua non* for effective management and governance of any institution.

Keeping in mind the essentiality of ERP as briefly delineated above, our Deemed University has developed an ERP system on our own, with the help of indigenous computer software and hardware experts among the monk-faculty and administrators and some outside experts. As one can appreciate, the development and fine-tuning of the ERP system is a continuous process and newer innovations are being constantly attempted to make the ERP system suitable for our conditions. While the ERP is now fully functional and in place, fine-tuning and customizing to our ever-growing newer needs is going on.

CENTRES FOR INTERDISCIPLINARY RESEARCH

1. CENTRE FOR ‘ONE HEALTH’

Another exciting recent development is the proposed **Centre for ‘One Health’**, the concept of ‘One Health’ gaining tremendous importance in the recent years. The concept is the integration of soil health, plant health, animal health, human health (at the individual and collective (community) levels as these are now being recognized as forming a continuum. The urgency of an integral, holistic approach to health is being now as never before, particularly in the wake of the devastating Covid-19 pandemic. The global pandemics of Covid-19 that has so far killed more than 5 million people and devastated life and economy of every continent, country and community have demonstrated more than ever before the fragility of public health before the viruses originating from the animal kingdom. Earlier series of regional pandemics during the past two decades – SARS, MERS, H1N1, H5N1, Ebola, Zika, Nipah – had struck an alarm bell that return period of global pandemics may be much more frequent in future than in the past. Hence prevention of pandemic disasters has acquired centre stage in the global discourse on reimagining public health for sustainable development.

The discourse has been further widened to include increasing incidences of microbial diseases of both animal and plant origins – bacteria, viruses, parasites and fungi – and the growing resistance of these microorganisms due to inappropriate use of antimicrobials on humans, animals, and plants. The discourse has also included emergence of new pathogens and exacerbation of existing burden of diseases due to anthropogenic climate change, loss of biodiversity, deforestation, degradation of environment and deteriorating quality of air, water and soil.

There is a growing realization that human, animal and plant health are interdependent and bound to the health of the ecosystem of which they are inseparable components. Health of all living organisms on the planet is intrinsically intertwined and therefore naturally driven interdependence of species can be disturbed only at the peril of the species. This has given rise to the concept of ‘One Health’ as a collaborative approach for understanding and managing risks for planetary health of all living organisms and encouraging a more sustainable balance of the delicate ecosystem. The concept was initially

advanced by the veterinary scientists and has gradually found traction among medical, environmental, agricultural, botanical, soil, aquatic, and other related disciplines.

Globally three UN agencies – WHO, FAO, UNICEF – and two international organisations, the World Organisation for Animal Health (OIE) and the World Bank joined hands to develop a strategic framework for Contributing to ‘One World, One Health’ in 2008. A number of academic, scientific, and civil society organisations around the world followed with new programmes on education, research and advocacy on one health. One Health Platform was set up in 2015 as a multi-disciplinary resource centre on one health across disciplines and sectors. Earlier in 2009 the ‘One Health’ Commission was established in the USA to promote a global movement on ‘One Health’. The Commission has mapped ‘One Health’ initiatives around the world. Since 2016, the International Day of ‘One Health’ is celebrated on 3 November every year.

Considering the growing global concern for an integrated approach to human, animal and plant health, and the unique position of India as an ancient civilization with strong philosophical tradition of Knowledge or Awareness of Oneness (called *ekatva vijnana* in the Upanishads or Vedanta) wherefrom the concept of ‘One Health’ flows as a natural consequence, with its large population of humans and animals highly vulnerable to epidemic diseases, the urgent need for multi-disciplinary education, research and advocacy on ‘One Health’ in India, it was decided that a Centre for ‘One Health’ shall be set up at the Ramakrishna Mission Vivekananda Education and Research Institute (RKMVERI). This Centre shall run educational and academic programmes and courses, conduct research, and promote awareness, extension and advocacy on ‘One Health’ across disciplines involving agricultural, veterinary, environmental, medical sciences with philosophical and spiritual underpinnings as the bedrock on which the whole edifice of Oneness stands. This non-dualistic knowledge (*advaita jnana*), forming the fundamental basis of any effort in the field of Oneness will thus become practical as envisioned by Swami Vivekananda in his famous thoughts on ‘Practical Vedanta’ who said famously: “The dry, abstract Advaita must become living—poetic—in everyday life.”

Our Deemed University, RKMVERI, is uniquely placed to start this multi-disciplinary Centre for ‘One Health’ as it has strong in-house capabilities in research and education in the form of the various Schools mentioned at the beginning of this writeup, wide extension activities, and large networking with scientific, academic and research institutions across disciplines and sectors. Further RKMVERI is ideologically founded on the bedrock of the ancient Indian philosophical and spiritual knowledge systems and tradition of ‘Oneness of All Existence’ and its modern interpretation and implementation in various manifestations in the lives and teachings of Sri Ramakrishna and Swami Vivekananda whose watch words were ‘harmony’ and ‘synthesis’. Romain Rolland, the great French savant and Nobel Laureate, in his famous biography

of Swami Vivekananda wrote: "In the two words equilibrium and synthesis Vivekananda's constructive genius may be summed up."

The Vision of this multi-disciplinary Centre for 'One Health' is to achieve global recognition over a period of the next five years as one of the leading centres of excellence on multi-disciplinary education, research, extension and advocacy on 'One Health'.

A comprehensive Task Force, comprising 25 persons from various disciplines—physics, agricultural biotechnology, agricultural sciences like soil science, animal/veterinary science, fisheries, human health, occupational health, rural development, medical science and technology, molecular/cell biology, neurogenetics, public health related medical profession, social work and service, disaster management, philosophy (Eastern and Western), statistics, pharmaceuticals, political science, management and administration, etc.,—has been formed to give a concrete shape to this 'One Health' initiative and evolve a concrete action plan that is easily implementable, thus making Advaita (Oneness) "living, poetic in everyday life" as Swami Vivekananda said.

The following three Divisions comprising scientists, doctors (both laboratory and practising medical scientists as well as socially in the area of public health and primary health) have been formed to work out the nitty-gritty and the action plan:

- (1) Education and Training Division,
- (2) Research and Innovation Division,
- (3) Extension and Outreach Division.

Three more Centres mentioned below are in the planning stage and these projects are likely to be implemented during the academic year 2022-2023:

2. CENTRE FOR ARTIFICIAL INTELLIGENCE AND AFFECTIVE COMPUTING

This will be an interdisciplinary Centre across the following Departments/Schools of the University:

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- ✓ Mathematical Sciences,
 - ✓ Indian Heritage,
 - ✓ Agriculture and Rural Development,
 - ✓ Rehabilitation and Sports Sciences,
 - ✓ Biological Sciences,
 - ✓ Environment and Disaster Management.
-

3. CENTRE FOR NONLINEAR DYNAMICS AND CHAOS

This will also be an interdisciplinary Centre under the following Schools:

-
- ✓ Mathematical Sciences,
 - ✓ Agriculture and Rural Development,
-

-
- ✓ Rehabilitation and Sports Sciences,
 - ✓ Biological Sciences,
 - ✓ Environment and Disaster Management
-

4. CENTRE FOR HUMANISTIC SCIENCES AND HUMANITARIAN STUDIES

This will also be an interdisciplinary Centre covering all the various Schools:

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- ✓ Mathematical Sciences,
 - ✓ Indian Heritage,
 - ✓ Agriculture and Rural Development,
 - ✓ Rehabilitation and Sports Sciences,
 - ✓ Biological Sciences,
 - ✓ Environment and Disaster Management
-

EXTENSION/OUTREACH SERVICE ACTIVITIES

(1) **VIVEKDISHA**--An ICT-based Network of the University.

(2) **Krishi Vigyan Kendras (KVKs):**

- (i) 'Sasya Shyamala' KVK located at Arapanch (under the Ramakrishna Mission Ashrama, Narendrapur Centre, 24-Parganas District)—already established and functioning for more than five years
 - (ii) 'Dhaanyaganga' KVK under Ramakrishna Mission Ashrama, Sargachhi, Murshidabad District—already established and functioning for the past three years
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ACTIVITIES OF THE 'VIVEKDISHA'

VIVEKDISHA, a unique service activity of the Ramakrishna Mission is an information and communication technology (ICT)-based network of Ramakrishna Mission Vivekananda Educational and Research Institute. It provides single window-based services like online education from secondary to undergraduate level, online teachers' training, Spiritual Heritage programmes, teachers' workshops and research programmes. It supports students, teachers and researchers through its interactive website. During 2019-20, Vivekdisha served more than 16000 students through its multimedia-based interactive online classes which were held six days per week.

The regular programmes of VIVEKDISHA are run in 25 remote centres and are monitored from the University's Expert Centre at Belur Math.

Ongoing Activities:

1. Online Classes:

Physics, Chemistry, Mathematics, Biology, Value Education, and Communicative English for students of the level of classes six to twelve are taught mostly through multimedia presentations i.e., through texts, pictures,

animations, real visual clips, video recordings from laboratory or operation theatres to make teaching-learning process more effective, joyful and fruitful. The medium of instruction is Bangla and English. VIVEKDISHA also facilitates conducting chemistry and economics classes for under-graduate students from USA and UK.

2. Other Facilities provided by the VIVEKDISHA Website:

The VIVEKDISHA web-site facilitates students of schools, colleges, and universities to take practice tests in different subjects at various levels. The questions are set in English and other Indian languages as well. Some edited videos of the online classes and some projects on various science subjects are available on the web-site. A 360° Studio provides a panoramic view of any place. It also provides an e-library which is a repository of valuable books with pictures, supporting documents, and important information.

3. Content Generation:

The contents of the multimedia presentations of different science subjects at the school and college levels were developed in Bangla or in English in order to fulfil the needs at local, national, and international (for Bangladesh students) levels. The content of the lessons was developed, based on the syllabi of the Boards of education of various states as well as the Central Board. Concept building and integrating different topics with the context of the lessons have been the main focus point of content generation.

4. Spiritual Heritage Programme for International Audiences:

VIVEKDISHA fulfills the spiritual need of the devotees residing abroad by enabling them to log in to the online classes from their homes. At present bilingual classes on *Sri Sri Ramakrishna Kathamrita (The Gospel of Sri Ramakrishna)* and *Srimad-Bhagavad-Gita* are conducted to which people from United Arab Emeritus, United States of America, United Kingdom, Canada, and Germany regularly log in.

5. Preparation of Integrated Science Text-books Incorporating Contemporary Research Findings:

VIVEKDISHA has prepared the contents for four books in Bangla which facilitates the building up of the fundamental concepts of science among students with an integrated approach, relating to various other subjects.

6. Values Education:

Students of various age groups were exposed to multimedia presentations depicting the universal message of Sri Ramakrishna and Swami Vivekananda, along with a facility for interactive discussion.

KRISHI VIGYAN KENDRAS (KVKs) RUN UNDER BY THE UNIVERSITY

The University runs the following **two KVKs under its aegis as sanctioned to it by Indian Council for Agricultural Research (ICAR), Ministry of Agriculture, Government of India:**

- (1) 'Sasya Shyamala' KVK located at Arapanch under Ramakrishna Mission Ashrama, Narendrapur, Dist. 24-Parganas, West Bengal and
- (2) 'Dhaanyaganga' KVK located at Ramakrishna Mission Ashrama, Sargachhi, Dist. Murshidabad, West Bengal.

Both these KVKs have a common mandate, scope and activities in their respective districts for the benefit of the farmers, to reach the discoveries made by the scientists in their laboratories to the farmers in their lands: 'lab-to-land' as it is commonly termed. Given below are the ICAR mandate, scope and activities of the KVKs which are being followed and implemented in letter and spirit by the two KVKs under the University at Arapanch and Sargachhi respectively. Some details about KVK is given in the Appendix below.

ABOUT KRISHI VIGYAN KENDRAS—CONCEPT, MANDATE AND FUNCTIONS:

1. The KVK Concept:

Krishi Vigyan Kendra (KVK) is a project of ICAR for testing and transfer of Agricultural technologies to bridge the gap between production and productivity and to increase self-employment opportunities among the farming communities. The trainings offered here follow the principles of "learning by doing" and "seeing is believing". It offers skill and knowledge oriented trainings in multidisciplinary areas like crop production and plant protection, horticulture, Animal Sciences and Fisheries, Home Science and Agricultural extension. The KVK is the light house of knowledge to the farming community of the State.

2. The KVK Mandate:

- 2.1. Organising vocational training programmes in agriculture and allied enterprises and other extension activities.
- 2.2. On-farm testing on farmers' fields of proven technologies in crop production, horticulture, livestock production, fisheries etc.
- 2.3. Conducting front line demonstrations on major cereal crops, oilseeds as well as horticultural crops.
- 2.4. In-service training to the field level extension officials.

3. The KVK Functions:

The growth of Indian agriculture is dependent on 103 million farm families cultivating 140 million hectares of land. It is impossible to reach such a huge number of farmers. The effective dissemination and transfer of appropriate technologies to needy farmers is very much essential for increasing agricultural production in the country. It is very difficult for farmers to gather latest information of technologies from various research institutes. Keeping this in view ICAR granted its sanction for establishment of Krishi Vigyan

Kendras (the farm science centres) in May 1992 and by March 1993 a network of 376 Krishi Vigyan Kendras (KVKs) were in place covering most of the districts of the country to function as 'single window system', wherein all the necessary information is made available to the farmers of the region through a single window as it were. As of January 2020, there were 721 KVKs covering all the districts of all the States in India, including additional KVKs in some larger districts.

Based on a bench mark survey of selected villages for socio economic appraisal and to understand the existing practices of the farmers, the KVKs were able to identify the technological gaps and critical needs and requirements of the farmers followed by farming operational modalities like training, demonstration and on-farm trials. Simultaneously the farm development work was also started as an important requirement for the strengthening of training cum demonstration infrastructure of the KVKs.

Apart from conducting these demonstrations various innovative approaches were undertaken for providing the environment friendly packages to meet the farmers' problem. An overwhelming response of the farmers to these eco-friendly practices later paved the way for forming various farmers' interest groups and self-help groups. These informal groups of self-experimenting farmers that provides an opportunity for sharing their innovations and practices among them. Further the KVKs started the Innovative "Farm Women's Club" for involvement of farm women in the dissemination of various technological interventions at faster rate.

The KVK has excelled in bringing the modern technological packages at the farmers' doorstep with the help of various instructional units. The KVK today has sufficient resources to impart training skills for not only the farmers but also the rural youth. The training schedule typically incorporates the existing needs and problems of the farmers for making a positive impact. The trainings are conducted both at the on-campus and off-campus locations. It invariably emphasizes the providing both the short term as well as long durational courses specifically to impart practical orientation to these courses. The KVK has started the instructional units for not only imparting the skills but also for providing the critical inputs as per the demand and need of the farmers. Wherever the response of the farmers to technologies under the Lab-to-Land Programmes and the on-farm-trials demonstrated by the KVKs was multi-fold, the need to take the assistance from the other funding agencies arose and the KVKs' bold initiatives resulted in convincing the various State and Central Govt. funding agencies to provide financial support for the innovative schemes and projects for further extending its extension programmes.

Given below are the details of:

- (1) Projects sanctioned by the various funding agencies of the Central and State Governments—Indian and Foreign Agencies (marked as Appendix 1—A+B) plus Grants sanctioned on various projects for the ‘Integrated Agriculture, Rural & Tribal Development’ at Ranchi ‘Off-Campus’ Centre (Appendix 2—marked as C):**
- (2) TOTAL AMOUNT RECEIVED FOR PROJECTS IN RECENT YEARS: Rs.14,58,41,042/- (Rupees Fourteen crore Fiftyeight lakh Fortyone thousand Fortytwo only)**
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APPENDIX 1

DETAILED LIST OF PROJECTS SANCTIONED BY VARIOUS FUNDING AGENCIES OF THE CENTRAL AND STATE GOVERNMENTS IN RECENT YEARS

A. Received from Indian agencies:

Sl. No.	Project Title	Principal Investigator	Start Date	Duration	Funding Agency	Amount sanctioned (in Rupees)
1	“Using Women Farmers’ Social Networks to Improve the Delivery of Agricultural Information through Information and Communication Technology in Selected Rural Areas of West Bengal”	Dr. Sanchayeeta Misra	01.04.2022	24 Months	Indian Council of Social Science Research (ICSSR), Govt. of India	7,00,000/-
2	“Modelling the livelihood impact of Technology Transfer Projects in Natural Resource Management using Fuzzy Logic Cognitive Mapping”	Dr. Rupak Goswami	01.04.2022	24 Months	Indian Council of Social Science Research (ICSSR),	7,00,000/-

					Govt. of India	
3	"Human Surface thermographic profiling as indicator of climate susceptibility and impact mitigation through localized social networking"	Prof. Pranab Kumar Nag	02.05.2018	36 Months	SPLICE -Climate Change programme, Department of Science & Technology, Govt. of India	69,42,650/-
4	Developing multi-stress Tolerant high yielding breeding materials in rice and Indian Mustard through modern breeding program".	Prof. Tapash Dasgupta	28.03.2020	36 Months	Agriculture Department (Govt. of West Bengal	84,65,000/-
5	"Development of Potential AChE-inhibitor from North East Indian Plants: Activity guided Isolation, Purification and Validation using trans-gene AD mouse"	Dr. Alok Kumar Hazra	01.06.2020	36 Months	Department of Biotechnology (NER-BPMC), Govt. of India	25,23,360/-
6	" Ionizing radiation-induced mutagenesis and rapid identification of mutant genes for the improvement of traditional aromatic rice"	Dr. Kishor Kumar	30.03.2022	36 Months	UGC-DAE-CSR, Govt. of India	258000/- (1st Year)
7	"Impact Assessment of Agricultural Research and Extension Organization : The Case of International Plant Nutrition Institute	Dr. Rupak Goswami	17.07.2018	18 Months	International Plant Nutrition Institute (IPNI),	1,10,000/-

	(IPNI) in India"				Govt. of India	
8	Fostering Network in Education, Research & Innovation in Environmental & Occupational Health	Prof. Pranab Kumar Nag	15.05.2016	36 Months	European Commission	54,00,000/-
9	Structure-function analysis of the centromeres and its associated centromeric protein CENP-A of the human pathogenic Candida parapsilosis sensulato species complex.	Dr. Gautam Chatterjee	26.05.2017	36 Months	Science and Engineering Research Board (SERB), Dept. of Science & Technology (DST), Govt. of India	40,49,734/-
10	Establishment of a biotech-KISAN Hub in Sunderban area of South 24 Parganas District of West Bengal;	Dr. Rupak Goswami	14.03.2018	24 Months	Department of Biotechnology Govt. of India	10,00,000/-
11	Atomic Structure Calculations: Effect of External Plasma and Spatial Confinement	Dr. Prasanta Kumar Mukherjee	15.01.2014	3 years	Science and Engineering Research Board (SERB), DST, Govt. of India	30,24,000/-
12	Telescope for the 'Positional Astronomy Centre' for education and research	Dr. Debashis Gangopadhyay	26.03.2014	3 Years	Dept. of Science & Technology , Govt. of	45,00,000/-

					West Bengal	
13	Single crystal growth, understanding and optimizing strongly correlated electron based thermoelectric materials	Dr. Amitava Bhattacharyya	25.01.2016	5 Years	Dept. of Science & Technology , Govt. of India	35,00,000/-
14	Algebraic and Geometric Topology	Prof. Samik Basu	16.03.2016	3 Years	National Board of Higher Mathematics(NBHM), Dept. of Atomic Energy (DAE), Govt. of India	2,88,500/-
15	On certain aspects of curvature operator and Riemannian functionals	Dr. Atreyee Bhattacharya	01.10.2015	5 Years	Dept. of Science & Technology , Govt. of India	95,00,000/-
16	On topology of manifolds admitting PSC Riemannian metrics and Stability of L^2 -norm of Wyle curvature tensor	Dr. Soma Maity	01.04.2015	5 Years	Dept. of Science & Technology , Govt. of India	95,00,000/-
17	G.K. Dimensions of Simple Modules over quantum polynomial algebra and skew polynomial extension	Dr. Ashish Gupta	25.03.2016	2 Years	NBHM, DAE, Govt. of India	3,02,500/-
18	Asset mapping under EPRIS project of ISRO	Dr. Debashis Gangopadhyay	17.11.2016	3 months	NRSC, ISRO, Govt. of India	90,000/-

19	Projective modules, complete intersections and orbit spaces of unimodular rows	Dr. Md Ali Zinna	19.01.2017	5 Years	Dept. of Science & Technology , Govt. of India	95,00,000/-
20	Combinatorial Commutative Algebra	Dr. Arindam Banerjee	01.09.2017	5 Years	Dept. of Science & Technology , Govt. of India	35,00,000/-
21	Approximation Algorithms for Guarding Polygons	Prof. Subir Kumar Ghosh	13.06.2018	3 Years	SERB, DST, Govt. of India	6,60,000/-
22	Rare events in synchronizing systems	Dr. Shamik Gupta	15.11.2018	3 Years	SERB, DST, Govt. of India	8,25,000/-
23	Zero-sum constants, regularity of Diophantine equations and other problems in Combinatorial Number Theory	Prof. Sukumar Das Adhikari	19.03.2019	3 Years	SERB, DST, Govt. of India	6,60,000/-
24	Imprecision and Uncertainties in Quantum Measurements: A Theoretical Study using the Large Deviation Theory	Dr. Shamik Gupta	21.02.2020	3 Years	SERB, DST, Govt. of India	6,60,000/-
25	“Collective dynamics of interacting nonlinear oscillators driven by coherent noise”	Dr. Shamik Gupta	29.12.2020	3 Years	SERB, DST, Govt. of India	40,11,392/-
26	State-of-the-Art 4K Closed Cycle Refrigerator for Understanding and Optimizing Novel Emergent Properties Of Quantum Materials	Dr. Amitava Bhattacharyya	13.01.2021	3 Years	SERB, DST, Govt. of India	32,26,806/-

27	Effect of different GTPase/ATPases on growth, physiology and virulence of <i>Staphylococcus aureus</i>	Dr. Arnab Basu	23.09.2021	4 Years	Department of Biotechnology Govt. of India	88,88,000/-
28	Understanding Honeycomb Layered Oxides' Unconventional Magnetism	Dr. Amitava Bhattacharyya	30.03.2022	3 Years	UGC-DAE CSR, Govt. of India	16,13,280/-
29	Algebraic analogue of a result of Mumford	Dr. Sagnik Chakraborty	13.05.2022	3 Years	SERB, DST, Govt. of India	6,60,000/-
30	Dynamics and Chaos in strongly coupled QFT: Deformations and Boundaries	Dr. Bobby Ezhuthachan	14.06.2022	3 Years	SERB, DST, Govt. of India	30,72,443/-
31	SERB International Research Experience for the year 2022-2023 with Thomas Prokscha at Muon Spin Spectroscopy at PSI, Paul Scherrer Institute (Psi) , Switzerland	Dr. Amitava Bhattacharyya	12.05.2022	6 months	SERB, DST, Govt. of India	15,31,306/-
32	All India Network Project of Organic Farming	Dr. Gautam Chatterjee	15.07.2015	Continuous (ongoing each year)	ICAR-IIFSR, Govt. of India	Per annum: 10,00,000/- (Received Rs.57,44,829/- so far)
33	Ramanujan Fellowship	Dr. Pushkar Malakar	01.06.2022	5 years	SERB, DST, Govt. of India	1,19,00,000/-
34	For JIVAN Project—research in the School of Biological Sciences	Centre for Research and Biological Sciences	17.07.2022	Continuous (ongoing each	Kolkata Gives Foundation	37,63,126/-

				year)		
Total Rs.(A)						12,10,69,9 26/-

B. Grants received from foreign agencies:

1	'One Health Project'			Continuo us (ongoing each year)	'Karuna America'- Karuna Trust, Based in Bengaluru HQ	US Dollar 100000 (Approx INR 80,00,000/-)
2	Research in idiopathic dilated cardiomyopathy and hypothyroidism	Centre for Research and Biological Sciences	19.04.2022	Continuo us (ongoing each year)	Dr. Manis Nandi	US Dollar 4831 INR 3,73,680/-
3	"SciTech4Climate Indo-Pacific Climate-Smart Agriculture Initiative : Project B: Ganges coastal zone climate smart agricultural production"	Dr. Rupak Goswami	01.06.2022	16 Months	Common- wealth Scientific and Industrial Research Organisatio n (CSIRO), Australia	AUS \$ 30000 (INR 16,35,000/-)
Total Rs.(B)						1,00,08,68 0/-

Total Grant from Indian and Foreign Agencies Rs.(A+B)	13,10,78,60 6/-
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APPENDIX 2

DETAILED LIST OF PROJECTS SANCTIONED BY VARIOUS FUNDING AGENCIES OF THE CENTRAL AND STATE GOVERNMENTS DURING THE LAST TWO YEARS (DURING THE PERIOD FROM 1 APRIL 2020 TO 31 JULY 2022) SPECIFICALLY BY THE RANCHI (JHARKHAND) 'OFF-CAMPUS' CENTRE IN THE SPECIALIZED AREA OF 'AGRICULTURE, RURAL & TRIBAL DEVELOPMENT'

SI. No .	Project Title	Principal Investigato r	Duratio n	Amount sanctioned in Rupees
1	Post-project Evaluation Study of Sansad Adarsh Gram Yojana	Dr. Deep Narayan Mukherjee	6 Months	2066416/-
2	Evaluation Study of 100 cluster of phase -1 under Shayama Prasad Mukherjee RURBAN Mission	Dr. Deep Narayan Mukherjee	5 Months	2414020/-
3	Science, Technology and Innovation Hub for creating sustainable livelihood opportunities of Schedule Tribes in Angara Block, Ranchi district, Jharkhand	Dr. Avijit Kr Dutta	3 Years	9102000/-
4	Ethnographic Study of Ten tribes of Jharkhand	Dr. Dipankar Chatterjee	9 months	630000/-
5	Study of Millet Production and Consumption pattern in last 20 years in Jharkhand	Dr. Deep Narayan Mukherjee	1 Year	550000/-
Total Rs.(C)				1,47,62,43

	6/-
GRAND TOTAL OF THE GRANT ON PROJECTS: (A+B+C)	14,58,41,0 42/-

**(Grant Total: Rupees Fourteen crore Fiftyeight lakh Fortyone thousand
Fortytwo only)**