

**RAMAKRISHNA MISSION  
VIVEKANANDA CENTENARY COLLEGE**



***Short Report***  
**2018**

**Prepared by IQAC**

**RAHARA  
KOLKATA – 700 118**

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## Introduction

*The Ramakrishna Mission Boys' Home at Rahara, a branch centre of the Ramakrishna Mission, was founded in 1944 as an orphanage with a nucleus of 37 boys rendered orphan by the Great Bengal Famine of 1942-1943. Since then the Home grew in dimensions and activities adhering to the principle of service to mankind in the spirit of worship. Today, the Home is an educational complex with several schools and colleges wherein nearly four thousand students are receiving education and training in different subjects and trades according to the aptitude of each individual.*

*This College which forms an integral part and unit of this educational complex is owned and managed by the Ramakrishna Mission. The foundation stone of the College was laid by Srimat Swami Vireswaranandaji Maharaj, the then General Secretary of the Ramakrishna Mission, on 3rd December, 1961 and the College started functioning in July, 1963. The College was established with a view to commemorating the First Birth Centenary of Swami Vivekananda, the Illustrious Patriot-Saint of India and with a view to imparting a general, value-based education in the light of the teachings of Ramakrishna-Vivekananda so that the young pupils may get ample opportunities to build up their character to make themselves useful to their families and to fulfill at the same time their basic obligation to the country.*

*The college is situated in the district of North 24-Parganas, identified by the Government as a district highly populated by citizens belonging to SC/ST, OBC and minority community. The district is also identified by the UGC Committee as low GER (**G**ross **E**nrolment **R**atio) district. The college not only caters the need of local students but it also attracts a large number of students belonging to lower-middle and low income groups from remote areas of West Bengal situated in the districts of South 24 Parganas, West Midnapore, Maldaha and areas adjacent to international border with Bangladesh.*

*The college offers higher education in five science branches – UG & PG courses in Chemistry & Botany and UG courses in Botany, Mathematics, Physics and Zoology. Since its very beginning, the vision of this college has been two-fold –(i) exposing young minds to advanced scientific topics and imparting hands-on experiencing to sophisticated analytical instruments and (ii) establish the college as a potential center of research activities; thus creating a strong tradition of academic activities and an ambience that favours the scholarly activities.*

*In all these years, the students of this college has excelled academically in the University Exams and secured high ranks in merit lists. The students of this college are also very enthusiastic to assess their talents in different National-level Examinations [e.g. JAM conducted by IITs, entrance tests conducted by IISc (Bangalore), JNCASR (Bangalore, ISM Dhanbad() and various other Indian Universities such as Jadavpur University etc.]. Students from our Post Graduate*

*Department of Chemistry has qualified in various National-level examinations such as NET, GATE etc. to become eligible to receive research scholarships.*

*As is evident from the trends emerging in recent years, majority of the UG students pursue higher studies in pure science or technology in the universities, with a few opting for job-oriented courses such as MBA, MCA etc. The choice of the PG students has been either to pursue a research career or to undertake intensive preparation for different jobs. Overall, the placement record over the past four decades have been satisfactory. Our students are well placed in different Nationally and internationally acclaimed academic and research institutions, in schools, in Government and semi-Government jobs, in private sectors, NGOs etc.*

*It is probably one of the very few undergraduate colleges in West Bengal which undertook research projects/programmes a decade ago. The devoted and untiring efforts of the staff members and research scholars have so far produced around **100** publications (in internationally refereed journals). The college has so far produced seven Ph.D. s, and currently fourteen(14) students are persuing research work for their Ph.D degrees..*

*The college envisions itself as a potential center of higher education in near future with increasing thrust in undertaking research projects in advanced scientific topics, thus attracting and engaging the best of the students to the frontier areas of respective discipline. With its currently available limited human resource, infrastructural and instrumental facilities, attaining those higher standards have become more difficult. The college expects a generous funding from the various Government / Non-Government agencies to meet its scientific and social obligations.*

## **Vision and Mission of the Institution**

### **Vision**

The college is a unit of Ramakrishna Mission Boys' Home, Rahara which is a branch centre of the worldwide organization, Ramakrishna Math & Ramakrishna Mission established by Swami Vivekananda.

Swami Vivekananda said 'My ideal indeed can be put into a few words and that is: to preach unto mankind their divinity, and how to make it manifest in every movement of life' & emphasized the need of 'Modern Science coupled with Vedanta'. Poised in these two visions the institution tries to follow the ideal of *Atmano mokshartham jagaddhitaya cha*, freedom from the bondage of all ignorance & misery by realizing one's divine Self and mending the path for material, intellectual and spiritual good of the entire world. Imbibing this spirit, the college envisions to manifest itself into a powerful centre of higher education aiming the full-fledged growth and fulfillment of all those coming in contact with it.

### **Mission**

The method followed to achieve the supreme good for oneself and for all others is '*Shivajnane jivaseva*' – service done in a spirit of worship. Here in this college, the goal is to serve the students mostly coming from economically constrained circumstances by providing them quality education in the field of Science and in the art of all-square Personality Development by:

- (i) Exposing young minds to advanced scientific topics and imparting hands-on training over sophisticated analytical instruments
- (ii) To establish the college as a potential center of research activities thus creating a strong tradition of deep-rooted academic pursuits and an ambience that favours the scholarly activities
- (iii) Imparting a man-making, character-building education by a balanced development of the 3H's- Head, Heart and Hand so that the students may turn out to be wise citizens able to shoulder the responsibility of the Nation.
- (iv) A culture of labour and service, focus and perseverance, simple living and high thinking is transmitted to the students who are the future of the nation.

This sort of education system which harmonizes the best of the 3 'S's - Science, Service and Spirituality is indeed one of the striking features of the college. Thus the institution stands tall to reach unimaginable heights which many others may only dream about.

## Detailed Existing Facilities of the college

Facilities	Details of facilities	Numbers and other details
Auditorium/seminar complex with infrastructural facilities		3
Sports facilities	Playground	5
	Gymnasium	2
Residential facilities for teaching and non-teaching staff	For teaching staff	5 residential quarters
	For non -teaching staff	6 residential quarters
Cafeteria		1
	Inpatient facility	Ramakrishna Mission Sevapratishtan being a branch center of the same organization, can be availed
	Outpatient facility	Ramakrishna Mission Boys' Home, Rahara Dispensary service is available
	Emergency care facility	Ramakrishna Mission Boys' Home, Rahara Hospital is available
	Qualified doctor- Part Time	10
	Qualified Male Attendant - Full Time	04
	Qualified Male Attendant - Part Time	02
Facilities like banking, post office, book shops	Bank	United Bank of India, Rahara Branch
	Post Office	Rahara Post Office
	Book Shops	Vivekananda Book House (rented)
		Sales Counter For Books on Value Education
Biological waste disposal		All the microbiological waste products and equipments used for that purpose are autoclaved on a regular basis
Generator or other facility for	Generator	40 kVA & two (3)125 kVA

management/ regulation of electricity and voltage	Green power supply with large battery bank	1. 5 kVA (three numbers)  2. 10 kVA (one number)  3. 3 kVA (five number)
	Solar power (on-grid)	72 Kwatt
Solid waste management facility		This is regularly done by Khardah Municipality

Details of increase in infrastructure facilities in last year:

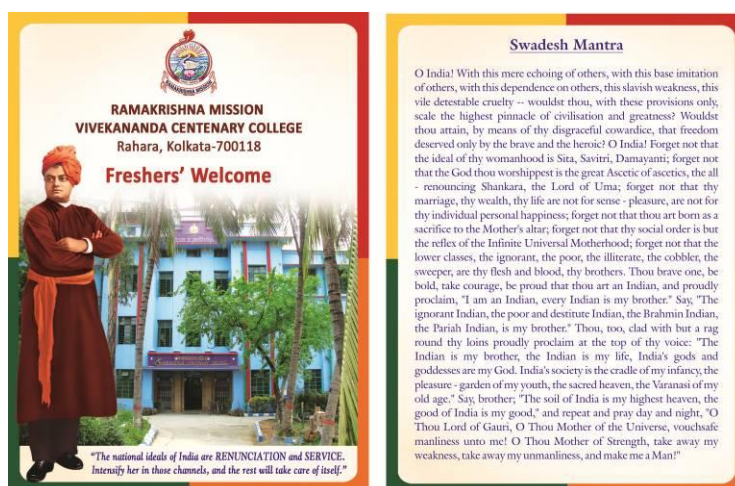
Facilities	Existing	Newly created	Source of Fund	Total
<b>Campus area</b>	4 acres (approximately) for College & 100 acres land for whole Mission	Construction of five- storied building completed (32000 sq. ft.). and new 12000 sq. ft. construction is going on	College Fund and Govt. Grant	-
<b>Class rooms</b>	32	16  + 3500 sq.ft (on-going)	Other Grant and Govt. Grant	48
<b>Laboratories</b>	29	2 microbiology laboratories	Other Grant	31
<b>Seminar Halls</b>	02	01 : 1000 sq.ft	College Fund	02
<b>No. of important equipments purchased (≥ 1-0 lakh) during the current year.</b>	31	02 ( Microscope)	UGC	33
<b>Value of the equipment purchased during the year (Rs. in Lakhs)</b>	-	10 lakhs(approx)		
<b>Others</b>	NA	1) 03 Elevators 2) Remodelled and relocated Library 3) Newly furnished Controller of Examinations Room and Exam section. 4) New LPG gas line for Chemistry dept. 5) 42 Kwatt on-grid PV solar system 6) Multigym with modern equipments	NA	NA

## Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

- Annual Eye Operation Camp
- Annual Blood Donation Camp
- Pulse Polio Immunization Programme Centre
- T.B. Seal Sale Camp
- Seminars: Total=26

### Other Activities of the college

- **Freshers' Welcome Ceremony:** Every year after the commencement of the new session, a cultural programme under the name 'Freshers' welcome' is organised to mark the welcome ceremony of the new comers. The freshers' welcome is the celebration of joy and harmony where the newly admitted students are acquainted with the ideals and workings of the institution. **Professor (Dr.) Sankar Kumar Ghosh, Vice Chancellor, UNIVERSITY OF KALYANI was the Guest-in-Chief in this ceremony-2017. The newly freshers have got a card in this ceremony.**



- **Prize Distribution Ceremony :** The college inspires the students for hard work and sincerity by all possible means. The students and staffs are encouraged for good work in different fields and duly awarded for their bright accomplishment. It has been a pleasure for the institution to be able to distribute prizes to the achievers every year in the same vivid fashion. Some generous well wishers and staff members present various endowments to our students. **In the year 2017, 148 students have got prizes for their Academic Excellence. Prof. V. S. Chauhan, Chairman of EC, NAAC, was the Guest-in-Chief in this ceremony-2018.**



- **Free Eye Operation Camp (IOL)** : The ideal of service followed in the Ramakrishna Movement is based on the principle, '*Siva-jnane-jiva-seva*', to serve man as potentially divine. For the last 18 years the college has been organising a free eye operation camp(IOL) as a part of the National Service Scheme (NSS) in collaboration with the Disha Eye Hospital, Barrackpore. The following is the details of Eye Operation Camp held in our college in the year 2017.

Event	Date	No. of patients
1 <sup>st</sup> Screening process	07/12/2017	171
Pre-operative check-up Disha Eye Hospital	10/12/2017	63
Camp on the college for Operation	16/12/2017 to 18/12/2017	48
Operation at Disha Eye Hospital	17/12/2017	48
Post Operative Check up at college	30/12/2017	48
Check up & Refraction at Disha	07/01/2018	48
Distribution of spectacle at college	22/02/2018	48

- **Blood Donation Camp:** That blood is the most sacred and precious constituent of life has been the fact approved by medical experts for centuries. With a similar objective, the Ramakrishna Mission Vivekananda Centenary College initiated its first blood donation camp more than 30 years ago and still organises the camp every year in the same vivid fashion. The institution has been honoured with a memento and certificate by the Association of Voluntary Blood Donors, west Bengal for organising 25 voluntary blood donation camps on their annual convocation held on January 20, 2008.

The college publishes the name of the donors and their respective blood groups to encourage and inspire everyone for this noble service. **About 120 students and staff-members donated blood in the year 2017.** The Association of Voluntary Blood Donors, West Bengal awarded the Nishikanta Roy Memorial Seva Trust Award for the competition year 2016-17 to our College for outstanding performance in the field of Voluntary Blood Donation by mobilizing Voluntary Blood Donors in the year amongst the Educational Institutions on 20th January, 2018.



- **Annual Sports** : The ideology of the college finds its expression through a wide spectrum of activities where healthy physique and enriched soul is highly valued. The annual sports meet is such an event, which attempts to manifest the thoughts and principles of Swamiji regarding the upheaval of a healthy society. It is held in the Ashram Playground. A variety of events such as 100 mt. race, 200 mt. race, 800 mt. race, discus throw, high jump, long jump, shot-put, different types of relay races are fixed to persuade active participation. **20 students got prizes in different events in college sports in the year 2017.**



- **Observation of memorable days throughout the year** : The college observed many programmes throughout the year with sincerity and succession. The humble way of observations of 15<sup>th</sup> August, 23<sup>rd</sup> January, 26<sup>th</sup> January, etc. are one of the special features of this college. These help the students to inculcate the values like the honouring of the motherland and the worthy sons of the motherland. The Saraswati Puja celebration i.e. the worship of Mother of Learning was performed every year with due solemnity and prayer. Moreover, the observation of Birth-day of Sri Sri Ramakrishna Deva, Sri Sarada Devi and Swami Vivekananda through the whole day programme in our Ashrama is a great attraction to all students and staff-members.
- **Samavartana-2017:** 2<sup>nd</sup> *Samavartana* of Ramakrishna Mission Vivekananda Centenary College, Rahara was held on 11-08-2017 to confer degree certificates to Postgraduate students who have passed out in 2016 and 2017. This year 133 postgraduate students, passed in 2016 & 2017 received their certificates. Prof. Dilip Chandra Nath, Hon'ble Vice-Chancellor, Assam University, was present as Guest-in-Chief. Prof. Basab Chaudhuri, Hon'ble Vice-Chancellor, West Bengal State University was grace the occasion and conducted the ceremony.



- **Inauguration of RFID system of Library:** The College has set up RFID system for the students and staff-member for accessing and issuing the library books. RFID system is the latest technology of Library automation. On 28-02-2018 Prof. Sougata Roy, Hon'ble MP has inaugurated this facility for our students and staff-members.



## LIBRARY FACILITY FOR THE STUDENTS

- ❖ College Central Library ( Accessible beyond College Hours)
  - *BOOK BANK facility, Short term lending, Reading Room for all*
  - *Software package (BookWarm developed by college) for Library Automation, Registered for INFLIBNET.*
- ❖ A **District Library** for all (about 50,000 Books).
- ❖ A **Mission Library** having value education books, articles and journals ( about 10,000 Books)
- ❖ Our college is the Local Chapter member for National Programme on Technology Enhanced Learning (NPTEL). single point of contact (SPOC) of our college for this Local Chapter is conducting the following activities :

- He publicises amongst the students and faculty of the college regarding all the initiatives of NPTEL.
- Brochures/posters of NPTEL content sent to him should be displayed at the places frequented by faculty/students of the college to get maximum visibility.
- The SPOC publicizes the online certification courses amongst the students and inform them about the courses being offered currently.
- He encourages students to enroll in these courses.
- The college identify faculty members who can act as mentors for the enrolled students who can encourage them to be active in the course, submit the assignments on time and register for the exam.

### Library & its Services

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
<b>Text Books</b>	32345	5724472	969	759658	33314	6484130
<b>Reference Books</b>	1459		209		1668	
<b>e-Books</b>	165000*					
<b>Journals</b>	21	22055			21	22055
<b>e-Journals</b>	6237*					
<b>Digital Database</b>						
<b>CD &amp; Video</b>	112		10		122	
<b>Others (specify)</b>						

## COMPUTER FACILITY & INTERNET FACILITY

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart-ments	Others
<b>Existing</b>	130	2	31	2	2	16	22	
<b>Added</b>	4	0	1	0	0	1	2	
<b>Total</b>	134	2	32	2	2	17	24	

## Other Existing Facilities for students

- ❖ NSS Facility
- ❖ Endowment & Free-ships, Institutional & Departmental Scholarship Facility
- ❖ Ion-exchange distilled water generation plant for supply of sufficient distilled water for laboratories use.
- ❖ The college has an instrument room having **HPTLC, IR Spectroscopy, UV-Vis spectroscopy, Flourimeter, Ultra Speed Beckmen Centrifuge**, etc.
- ❖ A **72 KW on-grid solar power** station is installed on roof of the college building.
- ❖ A **250 seated capacity** centralized AC seminar hall for the all workshop and seminar purpose.
- ❖ **Eight class rooms** are equipped with DLP projector along with other multimedia facilities.
- ❖ The chemistry lab is equipped with **Electrochemical Workstation, Magnetometer and UV-Vis Spectrometer**.
- ❖ Drinking water supply is equipped with **Aqua-guard and Cooler system** for all students and staff-members.
- ❖ A **big poly-house, two green shade-net house** and experimental garden for Botany Department.
- ❖ A well-equipped **tissue culture laboratory** is used for Plant Biotechnology research and PG works.
- ❖ A molecular **Myco-pathological laboratory** for research and PG works.
- ❖ The Botany and Zoology dept. has **Two PCR, one Gel-Doc, One -86°C Freeze, One Lyca Make 3-D Microscope, Growth Chamber, Freeze Dryer, Precision Balance, Four(4) Laminar Air-Flows, HPLC, Fluorescence Microscope** and many other sophisticated instruments.
- ❖ A **Smart-classroom** for digital touch-screen facility is available.
- ❖ One **Mushroom Cultivation Laboratory**
- ❖ Auto-regulated **Deep tube well** for water conservation and use
- ❖ Two(2) **ATM counters** service for 24 hours
- ❖ **Electricity office** for whole Rahara area situated in our campus
- ❖ One **carpentry section** and one **tailoring section** present in our Ashrama

- ❖ One **Digital Press** for publication
- ❖ One **Bakery for production** of cheap biscuit and cakes
- ❖ One **electrical and electronics** section for maintenance of all electrical/electronic gadgets
- ❖ One **sales counter** for value educations books and CDs
- ❖ One big **Auditorium** (1200 seats capacity) for common functions
- ❖ One 1100 seating capacity fully Air-Conditioned Sri Ramakrishna hall
- ❖ One Universal temple cum prayer Hall for meditation and prayer
- ❖ Four (4) **play-grounds**
- ❖ One **vocational section** with different trades
- ❖ One **B.Ed. college** for professional course
- ❖ One **Primary Teachers' Training** Unit

## Laboratory Facilities Available

Name of Department	No. of Laboratories
Chemistry	UG = 4 PG = 4 Research lab = 2 Computer lab = 1
Physics	UG = 7 Research lab = 1 Computer lab=1

<b>Mathematics</b>	<b>Computer lab = 2</b>
<b>Botany</b>	<b>UG=4, PG=4, Herbarium = 1</b> <b>Computer lab = 1</b> <b>Tissue Culture lab = 1</b> <b>Poly-House = 1</b> <b>green House = 2</b> <b>Advance Lab for Mycology=1</b> <b>Cancer Research Lab=1</b> <b>Research lab = 2</b>
<b>Zoology</b>	<b>UG = 4, Museum = 1</b> <b>Computer lab = 1</b>

## RECORDS OF ACADEMIC EXCELLENCE B. Sc. (U.G.)

Title of the Programme	Total no. of students appeared	Division/Class			
		Distinction %	I (No.)	II (No.)	Pass (No.)
Physics	49	N/A	30	18	0
Chemistry	51	N/A	46	02	0
Mathematics	40	N/A	14	22	6
Zoology	32	N/A	16	14	1
Botany	31	N/A	12	08	3
Chemistry (M.Sc.)	39	N/A	37	02	
Botany (M.Sc.)	28	N/A	16	12	

## RECORDS OF ACADEMIC EXCELLENCE M. Sc. (P. G.)

Title of the Programme	Total no. of students appeared	Division/Class			
		I (No.)	II (No.)	III (No.)	Pass (No.)
Chemistry (M.Sc.)	39	36	03		
Botany (M.Sc.)	26	20	06		

Name of the faculty member	No. of students obtained Ph. D. degree	Number of students working/registered for Ph. D. degree
Prof. Chandrakanta Bandyopadhyay	Five	nil
Prof. Tapas Ghosh	One	Two
Prof. Swapan Kumar Ghosh	Two	twelve
Prof. Biswajit Ghosh	Two	Five
Prof. D. Dutta	-	Two
Prof. P.K. Medda	-	Three

### Short Profile of Faculty Members

Research publication of the Department of Chemistry	
Prof. C. Bandyopadhyay	60
Prof. T. Ghosh	44
Prof. K. R. Sur	17
Prof. R. Patra	08
Prof. S. Banerjee	29
Prof. B. Dutta	12
Prof. B. Mondal	15
Prof. P. K. Tarafdar	19
Prof. K. Mandal	7
Prof. S. Suin	22
Prof. S. Sarkar	45
Research publication of the Department of Botany	
Prof. S. K. Ghosh	45
Prof. B. Ghosh	51
Prof. A. K. Choudhury	10
Prof. H.S. Dey	12
Prof. A. Kundu	09
Prof. B. Roy	02
Prof. A. Bhar	04
Research publication of the Department of Physics	
Prof. A. K. Pal	12
Prof. C. K. Das	05

Prof. Atisdipankar Chakraborty	10
Prof. Rajen Kundu	13
<b>Research publication of the Department of Zoology</b>	
Prof. P. K. Medda	16
Prof. D. Datta	23
Prof. K. Bhattacharya	04
Prof. A. Mukherjee	22
<b>Research publication of the Department of Mathematics</b>	
Prof. P.K. Rana	22
Prof. B. Mitra	04
Prof. S.K. Biswas	02
Prof. S. Pal	38
Prof. Amit Kumar Biswas	14
<b>Research publication of the Department of Language</b>	
Prof. M. Moulic	06
<b>Research publication of the Library</b>	
Sri R. K. Dey	02

### Existing Patents

**Prof. Biswajit Ghosh: GenBank (International Nucleotide Sequence Database)**

**Rice Accession numbers in NCBI GenBank.**

- Bhog dhan (Accession: JQ345686)
- Chini atap (Accession: JQ345687)
- Khas dhan (Accession: JQ345688)
- Nayanmuni (Accession: JQ345689)
- Roygorh (Accession: JQ345690)

**Prof. Subhabrata Banerjee: US Patents granted**

1. **Process for the activation of perovskite-type oxide**

**V. R. Choudhary and Subhabrata Banerjee**

**US Patent US 6,197,719 (2001).**

2. **Low temperature process for the production of hydrogen**

**Vasant Ramchandra Choudhary, Amarjeet Munshiram Rajput, Subhabrata Banerjee,**

**US Patent US 6,509,000 (2003)**

## **Prof. Kaustab Mandal: India Patents filed for publication**

- 1. A process of making bimetallic palladium based nanoporous alloy for hydrogen generation from formic acid at near ambient temperature.**  
Subrata Dasgupta, Kaustab Mandal and Debaleena Bhattacharjee  
India Patent, Application No. 0622DEL2015
- 2. A process of making impervious palladium membrane over ceramic substrate at near ambient temperature.**  
Subrata Dasgupta, Debaleena Bhattacharjee, Kaustab Mandal and Trilochan P. Sahoo  
India Patent, Application No. 2461DEL2013

### **Dr. Swapan Kumar Ghosh**

**Gene publication in Gene Bank, NCBI, U.S. National Library of Medicine 8600 Rockville Pike, Bethesda MD, 20894 USA)**

1. *Pseudomonas aeruginosa* strain mmp1 16S ribosomal RNA gene, partial sequence GenBank: KM491554.1
2. *Beauveria bassiana* isolate SKG/BB/2014/LC1 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence GenBank: KM491553.1
3. *Beauveria bassiana* isolate SKG/BB/2012/SILKWORM 18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1 and 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence GenBank: KM604668.1
4. *Trichoderma asperellum* isolate SKG/TA/2009/Agri Soil internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence GenBank: KM604669.1
5. *Diaporthe phaseolorum* strain DP/2013-14/SKG-02 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence GenBank: KJ451621.1
6. *Alternaria brassicae* isolate AB/2013-14/SKG-01 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence GenBank: KJ022772.1

### No. of patents received this year

Type of Patent		Number
National	Applied	1
	Granted	1
International	Applied	NA
	Granted	NA

### Awards received by the Faculty

**Prof. Chandrakanta Bandyopadhyay :**

**Prof. T. Navneeth Rao Best Teacher Award 2013” by ‘A V Rama Rao Foundation’ at Indian Institute of Chemical Technology, Hyderabad, on 5th September, 2013**

**Dr. Chandrakanta Bandyopadhyay, Department of Chemistry, received ‘CCRS Best Teacher Award’ by Coastal Chemical Research Society in 2015.**

**Prof. Swapan Kr Ghosh :**

**Award received : “Distinguished Scientist Award” presented by the committee of National level Conference “Biodiversity :Threats & Conservation through traditional & biotechnological approaches : organized by Dum Dum Matijheel College, Kol -74 in collaboration with Bose Institute & Botanical Survey of India , sponsored by : UGC, CSIR , DST.**

Dr.Swapan Kr Ghosh received the Science Excellent Award,2015,Presented by the presented by the committee of National level Conference “Natural Resource ,Diversity and Sustainable Development”: organized by University of North Bengal in collaboration with West Bengal Biodiversity of Board, FSE, Kolkata.

Dr.Swapan Kr Ghosh received UGC travel grant to visit Foreign country for presenting his paper ‘Study of ecofriendly control of *Penicillium* fruit rot of *Citrus reticulatus* by yeast’ in the 3<sup>rd</sup> International Academic Conference held between 27<sup>th</sup> May -31<sup>st</sup> May2012, organized by IJAS, Harvard University Campus , Boston , USA.

Dr.Swapan Kr Ghosh Chaired a session of the International Conference on 29<sup>th</sup> May,2012 from 14:00 -15:30 in the 3<sup>rd</sup> International Academic Conference held between 27<sup>th</sup> -31<sup>st</sup> May2012 ,organized by IJAS, Harvard University Campus , Boston , USA.

**Prof. Biswajit Ghosh**

Dr. Biswajit Ghosh , Department of Botany, received the Science Academies' Research Fellowship Award for Teachers in 2009.

Dr. Biswajit Ghosh , Department of Botany, received *Young Scientist Award in Plant Biotechnology* at the First International Conference on Bio-Resource & Stress Management. Held in February 6-9, 2013)

Prof. Samir Sardar, Dept. of Zoology, received the Best Presentation Award for Poster Presentation in the International Conference on *Aquatic Resources and Sustainable Management* held in Kolkata.

**International / National /State level Sponsored Seminars/workshop organized (during last year):****Seminars and Conferences (2017-2018)****INTERNATIONAL SEMINARS/PANEL DISCUSSIONS:**

1. International Seminar on Climate Change
2. International Seminar on Epigenetics
3. International Seminar on Psychrophilic adaptation and microbial diversity of Antarctica .
4. International Seminar on Climate Change issues
5. International Seminar on Difficulty in Discussing Climate Change
6. International Seminar on Microbiotechnology for environment and Cancer management
7. International Seminar on Swallow, Reflux and Brain
8. International Seminar on Save The Frogs

**NATIONAL SEMINAR:**

1. Workshop on Mathematical applications
2. Seminar on Trends in Surface Science and Related Areas (TSSRA) in collaboration with Indian Society for Surface Science and Technology (ISSST), Department of Chemistry, Jadavpur University
3. Seminar on Science advancement & IITs role
4. Seminar on Chemistry in Everyday Life
5. Seminar on Topological insulators
6. Seminar on New Age Skills for Future of Jobs
7. Workshop in Mathematics
8. Seminar on Swami Vivekananda, Sister Nivedita, Indian Society & Nationalism Sponsored by Indian Council for Social Science and Research (ICSSR), New Delhi
9. Workshop on Climate Change Organized by Sano Sansar initiative and Lieber Earth
10. Gold Nanostars in Plasmonic Photothermal Therapy
11. National workshop entitled Herbarium Techniques and Plant Nomenclature in collaboration with Central National Herbarium & ENVIS Resource Partner, Botanical Survey of India (MoEF & CC), AJC Bose Indian Botanic Garden, Howrah.

**STATE LEVEL SEMINAR:**

1. Seminar on 'India in the International Science Arena'
2. Teachers' Day Seminar: Recent Advancement in Biodiversity & Conservation & Recent Scientific Advancement in India
3. NSS Orientation Programme on AIDS, Thalassemia , Vector Borne Diseases
4. Seminar on Sister Nivedita : Facts & Facets
5. National Science Day Celebration Seminar
6. Seminar on Organic Substitution Reactions
7. Seminar on Nanotechnology for Quantum Devices
8. Seminar on Innovation in Science Education Research

**INSTITUTIONAL SEMINAR:**

1. Discussion on CBCS in Post Graduate level
2. Seminar on Plant – Nematode Interaction
3. Global climate change and its effects on Ecosystem & Biodiversity.
4. Carbon sequestration through green bioresource: A low cost method for mitigation of Air Pollution
5. Synthesis and Use of Metal complexes

**Seminars and Conferences with sponsoring Agency:**

Level	International	National	State	University	College
Number	5	4	2	0	2
<b>Sponsoring agencies</b>	1) PCRA  2) RKMVC College	1) NAAC  2) UGC  3) Science Academies  4) UGC-DAE  5) ICHR	1) RKMVC College 2) Design Division, State Water Investigation Directorate (SWID), Govt. of West Bengal		RKMVC College

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
<b>Refresher courses</b>	01
<b>UGC – Faculty Improvement Programme</b>	-
<b>HRD programmes</b>	-

**Faculty participation in conferences and symposia:**

Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
<b>Attended Seminars/ Workshops</b>	06	19	14
<b>Presented papers</b>	07	08	-
<b>Resource Persons</b>	02	07	01

<b>Orientation programmes</b>	07
<b>Faculty exchange programme</b>	01
<b>Staff training conducted by the university</b>	-
<b>Staff training conducted by other institutions</b>	
<b>Summer / Winter schools, Workshops, etc.</b>	05
<b>Others</b>	01

Details on research publications

	International	National	Others
<b>Peer Review Journals</b>	34	06	-
<b>Non-Peer Review Journals</b>	-		-
<b>e-Journals</b>		-	-
<b>Conference proceedings</b>	02		-

Details on Impact factor of publications:

Range	Average	h-index	Nos. in SCOPUS
0.2-4.029	2.412	41.25	9

Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
<b>Major projects</b>	i) 3 years	WB-DST	Rs. 98.8 lakhs	Rs. 72,83,676/-
	ii) 3 years	WB-DST	Rs. 25,28,032/-	Rs. 17,26,544/-
	iii) 3 years	WB-DST	Rs 19.78 lakhs	Rs 13,27,200/-
	iv) 3 years	DBT (WB)	Rs. 43,00,560/-	Rs. 16,64, 520/-
	v) 3 years	DBT (Govt. Of India)	Rs. 21,92,000/-	Rs 7,87,000/-
<b>Minor Projects</b>	18.3.17-18.3.19	UGC	Rs. 4,30,000/-	Rs. 3,77,500/-
	18.3.17-18.3.19	UGC	Rs. 2,95,000/-	Rs. 2,25,000/-
	18.3.17-18.3.19	UGC	Rs. 3,70,000/-	Rs. 2, 07,500/-
	18.3.17-18.3.19	UGC	Rs. 4,10,000/-	Rs. 3,15,000/-

	18.3.17-18.3.19	UGC	Rs. 3,84,000/-	Rs. 3,39,000/-
	2018-2021	DHESTBT	Rs. 4.05 lakhs	Rs. 2.75 lakhs
	2018-2021	DHESTBT	Rs. 3 lakhs	Rs. 2, 05,000/-
<b>Interdisciplinary Projects</b>	As mentioned in ii) and iii) of Major Projects			
<b>Industry sponsored</b>	NA	NA	NA	NA
<b>Projects sponsored by the University/ College</b>	NA	NA	NA	NA
<b>Students research projects</b> (other than compulsory by the University)				
<b>Any other(Specify)</b>	NA	NA	NA	NA
<b>Total</b>	NA	NA	NA	NA

No. of research awards/ recognitions received by faculty and research fellows  
Of the institute in the last year

Total	International	National	State	University	Dist	College
1	NIL	01	NIL	NIL	NIL	NIL

Plan of Action	Achievements
<b>Syllabus design according to Choice-Based Credit System for the Autonomous mode.</b>	The entire syllabus for 6 semesters have been framed according to CBCS pattern comprising of Core Courses, Generic Electives, Skill Enhancement courses, Discipline Specific Electives.
<b>Formation of Academic Council for the autonomous mode</b>	Academic Council was formed and the first meeting of the Academic Council was held.
<b>Formation of Board of Studies for different courses as a part of autonomy.</b>	Board of Studies was formed and the first meetings were held for the respective courses.
<b>Application for NIRF Ranking</b>	The College secured Rank 29 on a National basis.
<b>Organization of Seminars &amp; Workshops</b>	32 Seminars & Workshops were organised in one year.
<b>Promoting participation of the students in various Co-curricular events</b>	Avik Jana, Physics (Hons.) student, received the 4 <sup>th</sup> prize in an Inter-College Art Competition on "Bhagini Niveditar Seva Adarsha" in RK Mission Vidyamandira, Belur. *Three students of Zoology (Hons.) stood First in Poster presentation session of ALLERCON 2018 on 14.1.2018. *Tanmay Dutta, Zoology (Hons.) student, stood First in Poster presentation session of National Seminar on Biodiversity & Conservation Scenario in 21 <sup>st</sup> Century organized by West Bengal Biodiversity Board, SEBA and WBGSTA.

	<p>*Sourav Mukherjee, Physics (Hons.) student, stood First in debate Competition organized by VECC, Kolkata.</p> <p>*Snehasish Ghosh, Zoology (Hons.) student, stood First in a Problem Solving Contest in a workshop on Ecological Methodologies organized by Asutosh college.</p> <p>*Shoubhik Das and Rajnath Das of Zoology (Hons.) stood 2<sup>nd</sup> and 3<sup>rd</sup> respectively in a logo competition for ZOOQUEST 2018.</p> <p>* Three students and four students of Zoology (Hons.) respectively stood 1<sup>st</sup> and 2<sup>nd</sup> in Innovative Model Competition under BIOSCOPE-2018 Awards.</p> <p>*Four students of Botany (Hons.) stood 2<sup>nd</sup> in poster Presentation under BIOSCOPE-2018 awards.</p> <p>*Two students of Zoology (Hons.) stood 3<sup>rd</sup> in Debate Competition under BIOSCOPE-2018 awards.</p> <p>*Two students of Zoology (Hons.) stood 2<sup>nd</sup> and 3<sup>rd</sup> respectively in the Extempore Competition ZOOQUEST organized by W.B. biodiversity Board, Zoology Dept. of CU and ZSI, Calcutta.</p>
<b>To promote all round development</b>	<p><b>Introduction of a Six-month Certificate Course in Yoga for Health and Mind</b> in collaboration with West Bengal Council of Yoga and Naturopathy from the coming session 2017-18</p>
<b>Academic Excellence</b>	<p>*A Research Scholar (Md. Mabud Alam) of Botany Dept. received the 'Best Poster Presentation ward' in the IIIrd International Conference Bioresource and Stress Management in Jaipur(Nov., 8-11, 2017).</p> <p>*Anindya Sil, Zoology (Hons.) student, secured All India Rank 1 (Top 1%) in NPTEL course on Animal Physiology conducted by IITs; Debanjan Ray, PG Student in Chemistry, secured the Top 5% category marks. Out of 18 students under NPTEL course, 15 students secured the "Elite" range of marks (60-89%) and 01 student secured "Elite+Gold" status (&gt;=90%).</p> <p><b>*A number of students qualified for the PG and Integrated Ph.D. programmes in the institutions like IISc. Bangalore, TIFR, IITs, IISERs, BHU, CUCET etc.</b></p>

**ISBN Publications**

The College has published a book '*Sister Nivedita and Her Contribution to India*' with ISBN No. mainly based on the lectures delivered in an International Seminar held in the College in 2018.

**Seminars organized during the academic session 2017-18:**

Sl.	Date	Seminars	Speakers
1	13th May, 2017	Activities of Indian Academy of Sciences, Bangalore	Dr T.D. Mahabaleswara Coordinator (Lecture Workshops & Refresher Courses) Science Education Panel Indian Academy of Sciences Bangalore
2	18 <sup>th</sup> May, 2017	Statistics in different branches of science	Prof. Bimal Kumar Roy, Head, R.C. Bose Centre for Applied Statistics Unit, Indian Statistical Institute, Kolkata -700108
3	28th July, 2017	Seminar on Trends in Surface Science and Related Areas (TSSRA) in collaboration with Indian Society for Surface Science and Technology (ISSST) Department of Chemistry, Jadavpur University	Dr. S. Ghosh, Department of Chemistry, Jadavpur University  Dr. Kaustab Mandal, Department of Chemistry, RKMVC College, Rahara  Dr. Kaushik Bose, Givaudan (India) Pvt Ltd, Mumbai Dr. Tandrima Chaudhuri,  Dr. B. N. Dutta Smriti Mahavidyalaya Burdwan Bappaditya Naskar, Sundarban Hazi Desarat College
4	20th July,	Workshop on	Arijit Ganguly, Research Scholar,

	2017	Mathematical applications	TIFR
5	3rd August, 2017	Seminar Talk on 'India in the International Science Arena'	Prof. SibajiRaha Senior Professor of Physics & Former Director, Bose Institute
6	31st August, 2017	Climate Change	Prof. Ronald G. Prinn, Massachusetts Institute of Technology, Boston, USA
7	5th September, 2017	Teachers' Day Programme: Recent Advancement in Biodiversity & Conservation.  Recent Scientific Advancement in India	Dr. Kailash Chandra Scientist G & Director Zoological Survey of India Ministry of Environment & Forests Govt. of India Prof. P.K.Panigrahi, Director, IISER
8	7th September, 2017	Science advancement & IITs role	Prof. Indranil Manna, Director, IIT Kanpur
9	14th September, 2017	Chemistry in Everyday Life	Prof. Man Mohan Sharma, Padmabhushan, Padmavibhushan, FRS,
10	16th September, 2017	NSS Orientation Programme on AIDS, Thallassemia , Vector Borne Diseases	Doctors of SagarDutta Medical College.
11	30th October, 2017	Topological insulators	Prof. Kalobaran Maiti Department of Condensed Matter Physics and Materials Science Tata Institute of Fundamental Research
12	30th	Epigenetics	Krishnendu Mukherjee

	October, 2017		
13	31st October, 2017	Psychrophilic adaptation and microbial diversity of Antarctica .	Dr. Malay K Ray Former Chief Scientist & currently Honorary Visiting Scientist CSIR-Centre for Cellular and Molecular Biology Hyderabad
14	17th November, 2017	Sister Nivedita : Facts & Facets	Swami Purnatmananda, Secretary, Ramakrishna Mission Swami Vivekananda's Ancestral House and Cultural Centre, Kolkata. Topic: Sister Nivedita and Indian Nationalism  Sri SushantaChakraborty, Joint Secretary, Department of Higher Education, Science and Technology and Biotechnology, Govt. of West Bengal, Kolkata Topic: Sister Nivedita and Her Contribution  Dr. DebanjanSengupta Topic: Sister Nivedita - The Teacher  Prof. NirmalMaity, Associate Prof., Bidhannagar Govt. College Topic: Sister Nivedita – Her Contribution to Indian Science  Dr. Bishnupada Nanda, Head, Dept.

			of Education, JU Topic: Shikhamayi Sister Nivedita
15	29th November	Discussion on CBCS in Post Graduate level	Dr. DebnarayanBandyopadhyay, Hon'ble Vice Chancellor, Bankura University
16	30th November, 2017	Climate Change	Padma Shri Dr. JagadishShukla Distinguished Professor, George Mason University; President, Institute of Global Environment & Society (IGES); Managing Director, Center for Ocean-Land-Atmosphere Studies (COLA), USA & Member of Prime Minister of India's Council on Climate Change
17	15th December, 2017	Difficulty in Discussing Climate Change	Prof. Robert Rosner Departments of Astronomy & Astrophysics and Physics, Enrico Fermi Institute, Computation Institute, Energy Policy Institute at Chicago, Harris School of Public Policy Studies University of Chicago, USA
18	22nd December, 2017	New Age Skills for Future of Jobs	Shobha Mishra Ghosh Asst Secretary General FICCI
19	22nd December, 2017	Mathematics	Dr. Sourav Pal, IIT Bombay
20	13-01-2018	Workshop on Climate Change Organized by Sano Sansar initiative and Lieber Earth	Prasenjit Paul, Climate Reality Leader, UNEP

21	19-01-2018	Microbiotechnology for environment and Cancer management	<p>Prof.(Dr.) Ananda M. Chakrabarty, Distinguished University Professor, Deptt of Microbiology &amp; Immunology, College of Medicine, University of Illinois, Chicago, USA.</p> <p>Prof. Samit Chattopadhyay, Director, CSIR-Indian Institute of Chemical Biology(IICB), Kolkata.</p> <p>Prof(Dr. )H. Thatoi, HOD, Deptt of Biotechnology, North Orissa University, Odisha.</p> <p>Prof. (Dr.)Subrata Majumdar, Senior Professor, Div. of Molecular Medicine, Bose Institute, Kolkata.</p> <p>Dr. Rathindranath Baral, Scientist E, Asist. Director, Chitranjan National Cancer Institute, Kolkata.</p> <p>Dr Samir Kr Patra, Associate Prof. Deptt of Life science, NIT, Rourkela, Odisha</p>
22	29-01-2018	“Swallow, Reflux and Brain”.	<p>Dr. Bidyut K. Medda, Associate Professor of Medicine, Department of Medicine, Division of Gastroenterology &amp; Hepatology, Medical College of Wisconsin,</p>
23	15-02-2018	Gold Nanostars in	Sujit Kumar Ghosh

		PlasmonicPhotothermal Therapy	Department of Chemistry, Assam University, Silchar
24	22-02-2018 & 23-02-2018	National workshop entitled Herbarium Techniques and Plant Nomenclature	In collaboration with Central National Herbarium& ENVIS Resource Partner, Botanical Survey of India (MoEF& CC) AJC Bose Indian Botanic Garden, Howrah.
25	24-02-2018	Plant – Nematode Interaction	Dr. Papia Das Budge Budge College
26	28-02-2018	National Science Day Celebration <ul style="list-style-type: none"> <li>• Jijnasa- A Scientific Quest : Intra-College Quiz Competition on Science</li> <li>• Deliberation on Dr.C.V Raman</li> <li>• Deliberation on DNA-Double Helix Day</li> </ul>	Prof. Saugata Roy, Hon'ble, MP
27	03-03 -2018	Save The Frogs	Dr. Kerry M. Kriger, Director, Save the Frogs, NY, USA
28	09-03-2018	Global climate change and its effects on Ecosystem & Bio-diversity.	Dr. PaulamiMaiti, Associate Professor, Lady Brabourne College
29	26th March, 2018	Visualization- a Contest in Slide Making Held at the Dept. of Zoology	Judged by Dr. S.N. Maitra, APC College

30	31st March, 2018	Organic substitution Reactions	Dr. SoumenSarkar, Assistant Professor, Balurghat College
31	7th April, 2018	Nanotechnology for Quantum Devices	Dr. Samit Kr. Ray, Director, S. N. Bose Institute, Kolkata
32	28th April, 2018	Innovation in Science Education Research	Dr. Saurav Pal, Director, IISER; Kolkata
33	8th May, 2018	Carbon sequestration through green bioresource: A low cost method for mitigation of Air Pollution	Dr. BananiMandal, Asst. Prof. & Head, Department of Zoology; Jogesh Chandra Chaudhuri College, Kolkata
34	10-01-2018 & 11-01-2018	Celebration of Platinum Jubilee of Ramakrishna Mission Boys' Home, Rahara  Seminar on Swami Vivekananda, Sister Nivedita ,Indian Society & Nationalism Sponsored by Indian Council for Social Science and Research (ICSSR), New Delhi	<ol style="list-style-type: none"> <li>1. Hon'ble Consul General of Japan in Kolkata, Mr. Masayuki Taga</li> <li>2. Swami Jayananda, Secretary, RKMVC College</li> <li>3. Prof. BasabChaudhuri, Hon'ble Vice Chancellor, West Bengal State university, Barasat</li> <li>4. Swami JnanalokanandajiMaharaj, Secretary, Ramakrishna Mission Vidyapith, Purulia</li> <li>5. Shishir Roy, Chief Sub-Editor, AnandabazarPatrika</li> <li>6. Prof. SaradinduMukherji, Member, ICHR, New Delhi</li> <li>7. Prof. Sujit K Ghosh, MaulanaAbulKalam Azad Institute of Asian Studies</li> <li>8. Dr. NiranjanaSahoo, Associate Professor (Disaster Management), Xavier Institute of Social</li> </ol>

			Service, Ranchi.
			9. Swami Dhyeyananda, Principal, Ramakrishna Mission Shilpapitha, Belghoria
			10. Prof. SomenathChakrabarty, Professor, Department of Physics, Visva-Bharati

## Research and Development

The Institution has a strong culture of Research for more than two decades. It always caters to the various needs of the Faculty members and Research Scholars involved in Research:

1. The College had plans to start a Research Centre of its own with self-sustained infrastructure for Doctoral thesis. After proceeding towards fulfilment of that agenda, the affiliating University –conferred the status of a Research Centre to the Institution by the name '*Swami Vivekananda Research Centre for Multidisciplinary Research in Basic Sciences & Social Sciences*' in the year 2016.
2. A New Research Centre entitled '*Swami Vivekananda Research Centre for Multidisciplinary Research in Basic Sciences & Social Sciences*' has started functioning from this session in the institution as proposed by the affiliating University. The College has conducted independent RET examination for Ph.D. Entrance. 5 Research Scholars have enrolled themselves last year in the Dept. of Botany for pursuing their Ph.D. They are undergoing Course Work for Ph.D. in the College itself under the Research Centre.
3. The research infrastructure includes an array of sophisticated scientific instruments like HPTLC, UV & IR Spectrophotometers, Fluorophotometer, Geldoc, *Leica* digital 3-D and 2-D Microscopes, Beckmann Ultracentrifuge, High precision balance etc. The College keeps on enriching its instrumental facility. In the last Academic Session the College had procured a Gas Chromatography instrument for research in the Department of Chemistry.
4. Many of the newly joined Faculty members have been encouraged to submit Minor Research Projects as well as Major Research Projects. This year five faculty member has got Minor Research Project from UGC.