

**PROCEEDINGS OF THE 54<sup>TH</sup> MEETING OF RESEARCH ADVISORY COMMITTEE OF  
CSR&TI (CSB), BERHAMPORE HELD ON 21 & 22<sup>ND</sup> JANUARY 2022 IN DUAL MODE  
(PHYSICAL / VIRTUAL)**

The 54<sup>th</sup> meeting of the Research Advisory Committee (RAC) of CSRTI (CSB)-Berhampore was held on 21 & 22<sup>ND</sup> January 2022 in dual mode (Physical / Virtual) to review the progress of R&D projects/programmes under the Chairmanship of Dr. Chirantan Chattopadhyay, Principal Scientist & Joint Director Academic (Actg.), ICAR-Indian Institute of Agricultural Biotechnology, Ranchi and Former Vice Chancellor, Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal.

At the outset, Dr. Dipesh Pandit, Scientist-D (PMCE) welcomed the Chairman, all the esteemed Members of the RAC (2021-23), Scientists and other participants to the 54<sup>th</sup> meeting.

Dr. Kishor Kumar , C.M., Director, CSRTI-Berhampore and Member-Convenor, RAC presented the R&D highlights, extension activities, BV-CPP program, transfer of technology, training activities of the CSRTI-Berhampore (WB) and its attached nested units located in different Eastern and North-Eastern States.

Dr. Chirantan Chattopadhyay, Chairman-RAC in his opening remarks greeted and thanked all the participants for organizing the meeting for two days both in physical and virtual mode. The Chairman appreciated the initiative taken by the Director Dr. Kishor Kumar, C.M. and for continuing the research work at Institute level as well as under extension to meet the demand of sericulture in Eastern and North-Eastern states. He emphasized the need of quality publications and patents and anticipated for fruitful interaction of the members during deliberation. The farmer representative Mr. Bikash Roy expressed his happiness over the breeds/hybrids and its productivity, quality and remunerative price ever obtained. He also added the better utilization of Sampoorna for uniform spinning. Chairman requested to ensure the presence of representation of DoS, West Bengal in the meeting to streamline the sericulture improvement. At the end of his opening remarks, Chairman expressed his happiness on the initiative taken by the District Magistrate by organizing all the stakeholders of silk industry and formulating a developmental project for Murshidabad district under the chairmanship of Dr. V. Sivaprasad, former Director, CSR&TI-Berhampore, and presently Director (Tech.), CSB-Bangalore.

List of participants is appended in **Annexure-I**.

Subsequently, agenda-wise items were taken up for discussion.

**ITEM NO.1:** Confirmation of the minutes of 53<sup>rd</sup> meeting of RAC held on 23rd August 2021 at CSRTI Berhampore.

As no comments were received from any member of the committee, the minutes of 53<sup>rd</sup> RAC meeting were confirmed.

**ITEM NO.2:** Review of follow-up action taken on the recommendations/ decisions of 53<sup>rd</sup> meeting of RAC held on 23rd August 2021.

The follow up action taken on the decision of the committee were reviewed and the progress was found satisfactory.

**PIB 3627: Development of superior mulberry (*Morus spp.*) genotypes through Polyclonal Seed Orchard:** the house recommended reducing the population size of polyclonal hybrid progenies from 785 using statistical tools.

**[Action: PI: Dr Yallappa H, Sci B]**

### **ITEM NO. 3: REVIEW OF CONCLUDED PROJECTS:**

There were no projects concluded during the period. However, concluded report of one pilot study (Dec 2020-Nov 21) was presented as below:

#### **Pilot Study: Development of mulberry crop schedule for optimal silk productivity in West Bengal**

The PI presented the report on developing a new mulberry crop schedule for optimal silk productivity in Murshidabad district of West Bengal. The PI informed that higher leaf yield and cocoon yield under the new crop schedule compared to existing schedules has been observed. Hence, the new schedule may be tested in large scale before recommendation is made to farmers for higher silk productivity. The PI informed that the rescheduling is only for the Southern part of West Bengal.

The RAC accepted the suggestion for crop rescheduling with the following recommendations:

1. Analyze benefits of the rescheduled crop over the existing one.
2. Try the new schedule with a few farmers, consider PI and commercial crops and discuss with DoS (West Bengal) to match with state requirement.
3. Mr. Bikash Roy, Rearing's Representative opined that the new crop schedule tested at CSRTI-Berhampore holds good for Murshidabad district and required to be tested in other districts. If the results are better it can be recommended.

[Action: PI: Dr Suresh K, Sci C]

### **ITEM NO. 4: NEW RESEARCH PROJECT PROPOSAL FOR APPROVAL**

1. **Title: Establishment of pilot plant for production of pharmaceutical grade sodium copper chlorophyllin from silkworm feculae.**

#### **Objectives:**

1. To install a pilot plant for the production of sodium copper chlorophyllin (SCC) from silkworm feculae.
2. To characterize the SCC from silkworm feculae.
3. To improve the quality standard of the synthesized SCC.

#### **Duration: 3 years**

Before submitting full project proposal, as per suggestion of the Referees, a Pilot Study has been conducted to gather more information. On the basis of that, the full project proposal was presented by Dr. Mihir Rabha, PI along with objectives, importance of the Chlorophyllin, requirement of pharmaceutical grade chlorophyllin in India and the present status, requirement and import.

**Decision:** The Committee appreciated the proposal being targeted for utilization of the seri-by-product. The new project proposal was approved with the following modifications. The RAC advised to incorporate suggestions from Referees. The original budget proposed is Rs. 99.8 Lakhs which was considered to be on higher side and suggested to revise the budget as per RAC and referees' suggestions. However, cautioned about the budget requirement of other National Institutes for collaboration and its budget requirement.

The following suggestions have been made by the committee:

1. To initiate the work with 10 kg of silkworm feculae.
2. To standardize the protocol and technology and scale up the production instead of pilot plant installation and find out an entrepreneur for large scale production later.

3. To get guidance from Pharma experts / Chemical Engineers in techniques / protocol to produce pharmaceutical grade product and purification
4. To find cost involved in manufacture in India in comparison to import
5. To find market potential of the product in India and the economic viability
6. To find out utility of the instruments after the proposed project.
7. Re-budgeting is required including expense for collaboration with Pharma industry/ Institution

[Action: Dr. Mihir Rabha, Sci.- B, Silkworm Pathology & Mr. Kharsru Alam, Sci.- B, Entomology]

## 2. Title: Content analysis for IFS system in hilly regions of West Bengal

### Objectives:

1. To identify the IFS Models based on existing cropping pattern/intensity.
2. To estimate economics of different crops grown in the region and propose ideal Seri-based IFS model

**Duration:** 3 years; Budget: Rs. 4.6 L

Dr. Parameswara Naik presented the proposal with modification suggested by some of the Referees.

**Decision:** The RAC approved the proposal with modification proposed by the Referees and also suggested to include the following points:

1. Find the economic viability as the terrain contains three situations such as hilly, plain and valley
2. Select areas from homogenous region instead of high, low and plain altitudes
3. To compare farming and seri-farming and find the final outcome
4. Increase the budget if required
5. Find the benefit of IFS based on farmers' preference and advantage
6. Need to include participatory workshop for awareness

[Action: PI: Harishbabu S., Pranab Burma (KVK-KPG), CI: Zakir Hossian, Parameswaranaiik J. and Khasru Alam]

## ITEM NO. 5. REVIEW OF PROGRESS OF ON-GOING PROJECTS

The progress of eight on-going research projects of main institute and nested units along with ToT/ Extension/ Training activities were presented by the respective PI/CI; reviewed by the RAC and suggestions made were as follows:

### MULBERRY IMPROVEMENT SECTION

#### 1. PIE 02002 SI: Evaluation of performance of mulberry genotypes C-9 under red and laterite soils

The RAC observed that the progress of the project was satisfactory and as per milestones. PI was advised to collect rainfall data and weather parameters.

#### 2. PIB02010SI: Final yield trial of promising high yielding mulberry genotypes for Eastern and North-Eastern India

The progress of the project was satisfactory and as per milestones

#### 3. PRP 08002 MI: Identification of candidate genes based powdery mildew resistance for utilization in disease resistance breeding in Mulberry [Collaborative project of SBRL, Kodathi]

The RAC enquired on the check phenotypes or control used and adjusted values under ARBD design.

**4. PIE13001MI: All India Co-ordinated Experimental Trial for Mulberry Varieties (Phase –IV)**

The house advised to find the variation among the genotypes and find out best performing location.

[Action: Dr. K. Suresh, Scientist-C, MBG]

**5. PPA 02005SI: Optimization of spacing and nutrient dose for newly developed high yielding mulberry variety C 2038 under irrigated condition**

The PI was advised to find the benefit-cost ratio in terms of leaf yield, DFLs to be reared, fertilizer input and optimized utilization of nitrogen fertilizer besides cautioning about pest resurgence.

[Action: Dr. Yallappa, Scientist-B, MBG]

**6. PIB 02007 SI: Improvement of mulberry leaf longevity in Eastern and North Eastern states of India**

The RAC opined that the progress of the project is satisfactory. However, suggested to mention the age of the plantation in the study. Different pathways and other factors involved in ageing are to be considered before selection of candidate genes. In addition, cost-benefit ratio to be computed and silkworm bioassay is to be conducted. The Chairman advised to get approval for the purchase of instruments like NDVI Analyzer & IRGA from C.O at the earliest.

[Action: Dr. Deepika, Scientist- B, Host Plant]

**SILKWORM IMPROVEMENT SECTION**

**7. AIB 02006 MI: Improvement of Nistari lines for survival and Silk productivity**

The PI presented the project. The RAC advised for directional selection based on filament length and also to conduct Cocoon analysis for the non-selected cocoons to arrive at the shell weight of the selected batch. Sex ratio 1:1 is to be followed for cold reeling. Control batch has to be maintained for comparison with the selected batch to assess the selection impact. The committee felt that the progress achieved is satisfactory.

[Action: Dr. Th. Ranjitha D, Scientist- B, SBG]

**8. AIB 02009 MI: Authorization trials of silkworm hybrid, 12Y x BFC1 in Eastern & North East India**

The RAC appreciated the DFL supply and results obtained from different states under the authorization program. However, the house advised to generate reeling data from CSTRI, Bangalore and as well at Malda unit in West Bengal.

[Action: Dr. N. Chandrakanth, Scientist-C, SBG]

**B. Collaborative projects with other CSB institute as CI**

**10. AIB01009MI: Evaluation of New Bivoltine Double Hybrid, TT21 X TT56 at Farmers' Level for Authorization for Commercial Exploitation (Coll. of CSRTI - Mysore)**

The committee felt that the progress achieved is satisfactory. The RAC advised to compare the rearing and reeling performance of the TT21 X TT56 with that of control double hybrid FC1 x FC2.

**11. AIE06002MI: Evaluation of Bivoltine Silkworm Genetic Resources for Tolerance to Abiotic Stress in Selected Hotspots (Coll. of CSGRC - Hosur)**

The committee felt that the progress achieved is satisfactory. The RAC advised to ensure leaf quality

and better rearing practices to improve cocoon traits and separate rearing for susceptible breeds.

[Action: Dr. N. Chandrakanth, Scientist-C, SBG]

**12. AIT 08005MI: Development and evaluation of Bidsenovirus resistant silkworm hybrids developed from marker assisted breeding lines-Phase II (Coll. of SBRL- Kodathi)**

The committee felt that the progress achieved is satisfactory. The RAC advised to give photos on infected / control larvae as well as nature and structure of BmBDV virus.

[Action: Dr. Mihir Rabha, Scientist-B, Silkworm Pathology]

**BIOTECHNOLOGY SECTION**

**13. AIC 02004CN: Molecular characterization and assessment of the efficacy of low molecular weight peptide isolated from mulberry leaf against flacharie disease of silkworm (with UNB Siliguri)**

The PI presented the project and the committee felt that the progress achieved is satisfactory. In order to complete the approved objectives and work plan, the PI requested for extension of the project for six months within the available budget. The work was delayed due to closure of collaborating Department in University of North Bengal during COVID-19 pandemic. Dr. Palash Mandal, Collaborator also requested to extend the project. The RAC approved the request and recommended for extension of the project for six months (15<sup>th</sup> May to 14<sup>th</sup> December 2022) within the available budget of the project that may be pursued with C.O. for necessary concurrence.

[Action: Dr. Pooja Makwana, Scientist-C, Biotech]

**14. AIT 02012CI: Characterization of mulberry silkworm, *Bombyx mori* L. mutants for tolerance to flacherie syndrome through genome editing tools (DST-JSPS project)**

The project was approved by the CSB in October 2021. Dr. Pooja M, Co-PI presented the project and its background on the DST-JSPS approval as travel grant and CSB approval for research on mutant development. The RAC appreciated the International Collaboration and recommended the project for implementation. The RAC advised to get approval from Institute Bio-Safety Committee (IBSC) for the Genome editing work.

[Action: Dr. Pooja Makwana, Scientist-C, Biotech]

**15. AIT 02008 SI: Identification of high humidity tolerant silkworm breeds/hybrids for E & NE India**

The RAC advised to find out more literature on different biotic and abiotic stresses. The committee advised to identify different candidate genes associated with different stresses and confirm the role in high temperature and humidity stress conditions following which bioinformatic analysis by protein modeling can be taken up. Reproductive fitness has to be assessed after high humidity stress simulations.

[Action: Dr. Raviraj, Scientist-B, SBG]

**SEEM Division**

**16. MOE 02011EF: Development of Seri-Entrepreneurship through sericulture chawki business by setting up 02 Chawki Rearing Centers (CRC) as demonstrative units in Murshidabad district, West Bengal [NABARD Funded project]**

Dr. Shafi, PI presented the progress. The project has been initiated in April-2021. However, as per advice of RCS, CSB-Bangalore the project along with Referees' Comments was put up before RAC for ratification. The RAC appreciated the attempt of introduction of entrepreneurship in sericulture business and felt that the progress achieved is satisfactory. The RAC advised to include details of the farmers feedback and to include the future plan for the entrepreneurs, multiply the success in different locations along with DoS and NABARD. The house enquired about the temperature and humidity conditions of CRC buildings, leaf requirements for 100 dfls, etc. Advised to assess the leaf traits of chawki garden and collect details on carbohydrate, protein and moisture content of the leaf grown for chawki rearing. Also suggested for taking care of uniform number population of chawki worms while distributing to farmers.

[Action: Dr. Shafi Afroz, Scientist-C, SEEM]

### **Trial of Technologies**

#### **On Station Trials (OST):**

##### **Progress:**

1. Evaluation of high yielding and low temperature stress tolerant genotypes viz., C1 & C11 (MLT):  
No specific comments

[Action: Dr. Suresh, Scientist-C, MBG]

2. Validation of new ecofriendly bed disinfectant (SERIWIN): The RAC advised to collect the disease (%) from the LABEX- treated, SERIWIN-treated and untreated rearing beds in addition to ERR.

[Action: Dr. Mihir Rabha, Scientist-B, SW Patho]

3. Low cost drip fertigation for Mulberry: The RAC advised to consult with Soil Scientists for most suitable fertilizer combinations for liquid fertilizer

[Action: Dr. Yallappa, Scientist-B, MBG]

4. Evaluation of high yielding & bacterial leaf spot resistant genotype (C7) with C2038 as check variety: The RAC suggested to collect the climate data at each test centre

[Action: Dr. Deepika, Scientist-B, MBG]

#### **On Farm Trials (OFT)**

##### **Progress:**

##### **1. Evaluation of double hybrid BHPDH (3.2x8.9) in E & NE Region**

Dr. Ravi Raj presented the progress in the OFT in the absence of Dr. V. Lakshmanan. The program achieved the DFL target (20065) with yield of 59 kg/ 100 DFLs in favourable seasons and 51 kg / 100 DFLs in the unfavourable seasons. The RAC approved the final output of the OFT program and recommended the double hybrid BHPDH (3.2x8.9) for hybrid authorization trial.

[Action: Dr. V. Lakshmanan, Scientist-D, SBG]

##### **2. Demonstration of Sampoorna for improved cocoon quality**

The progress is as per schedule.

[Action: Dr. Mihir Rabha, Scientist-B, SW Patho]

##### **3. Popularization of newly authorized mulberry variety C-2038 & others**

The progress is as per schedule.

[Action: Dr. Suresh K, Scientist-C, MBG]

**4. Popularization of Chawki Rearing and**

**5. Popularization of Collapsible plastic Mountage & Shoot feeding (shelf-rearing)**

Dr. Sreenivas G, Sci-D presented the OFTs of SEEM Division. The RAC advised to find out:

- a. Adoption or rejection of the above technologies with reasons to be assessed at different locations.
- b. To achieve the target of extension communication programs

**[Dr. Sreenivas G, Sci-D & Dr. Shafi Afroz, Sci-C, SEEM]**

**6. Demonstration of Bio-control agents (*Scymnus* & *Chrysoperla*)**

Mr. Khasru Alam presented the progress and informed the house that biocontrol agents will be released from 1st week of February-2022.

**[Action: Mr. Khasru Alam, Scientist-B, Entomology]**

**AGENDA NO. 8: EXTENSION (ECP) AND OTHER PROGRAMMES (CPP):**

Dr. Sreenivas, G. Sci-D presented in details on the Extension Communication Programmes (ECP) of different field units located in different Eastern and North-Eastern States, participation of farmers and topics discussed before them. He informed the house that though the ECP programmes were affected due to COVID-19, yet all the targets will be achieved within the financial year. He also presented the progress of the CPP programmes.

**[Dr. Sreenivas G, Sci-D & Dr. Shafi Afroz, Sci-C, SEEM]**

**AGENDA NO. 9: TRAINING (CBT) AND OTHER PROGRAMMES:**

Dr. Parameswar Naik presented the targets and achievements of the Training division. The RAC appreciated the contribution and online mode training and advised to make Videos and Institute-Apps to transmit the information at farmers' level.

**[Action: Dr. Parameswar Naik, Scientist-B, Training]**

**AGENDA NO. 10: ANY OTHER POINTS FOR DISCUSSION:**

Contributions of Dr. Sukhabrata Sarkar, Scientist D, Divisional Head (Training) was appreciated and wished him a happy and peaceful retired life after superannuation on 28<sup>th</sup> February 2022.

**AGENDA NO. 11: CONCLUDING REMARKS FROM THE RAC MEMBERS**

**Mr. Bikash Roy, Rearing's Representative:** Mr. Bikash Roy expressed his happiness over the breeds / hybrids and its productivity, particularly in the last Agrahayni crop (Oct.- Nov.), its quality and the remunerative price ever obtained. He also added the better utilization of Sampoorna for uniform spinning. The Chairman RAC felt very happy about his statement and he opined that the farmers' opinion is one of the take-home lessons of the meeting which should be maintained in future crops also. At the same time the farmers' representative opined that the number of farmers and production has hit a blow during the year due to COVID.

**Prof. Somnath Bhattacharya, Member:** Commented on seri-farming to be compared with normal farming alone. Based on the findings, further extension can be taken up. He advised to take up the initial studies on candidate gene analysis and confirm the role of genes in stress conditions. He emphasized the importance of finding parameters affecting the existing rearing schedule and the benefits expected under new changing schedule. Further, appreciated the presentations, various research activities and extension work undertaken.

**Prof. Varatharajan, Member:** Appreciated the research work with biological implications that are undertaken by the Institute. However he emphasized to analyze the role of humidity on rearing and silkworm protection from diseases.

**Prof. Debabrata Basu, Member:** Advised to add economic feasibility, farmers' evaluation in each project and to take care of disease and insect-pests in farmers' rearing. The success stories have to be multiplied in different locations based on needs.

**Dr. Nirmal Kumar, Member:** Advised to collect data on % disease incidence after spraying bed and room disinfectants. He advised to compare the rearing performance of double hybrids (BHP-DH) with FC1 x FC2. Stressed on the necessity of frequent field visits of the scientists and the requirement of discussion with stake holders for value chain intervention and economic benefits.

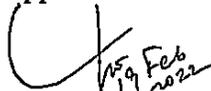
**Dr. Manthira Moorthy, Sci-D, RCS, C.O. Bangalore, Member:** Addressed to include research on mulberry physiology for plant improvement. Provide economics of CRCs along with control data.

**Dr. Chirantan Chattopadhyay, Chairman:** The Chairman appreciated the scientific contribution of the Institute. He emphasized the need of addressing biotech issues including allele / gene mining and germplasm improvement through networking projects. Improved budget utilization for each project was highlighted. He advised to find disease level and insect-pest infestation, if any, in farmers' samples and test for pathogens. On the request of farmers for rearing support like Labex, bleaching powder, disinfectants, etc., the RAC advised to send a letter to the concerned local authority on the requirements; however, advised farmers to pay for the inputs. In addition, availability of other schemes to support the farmers may also be explored.

The Chairman advised to have a relook into the economics of the present sericulture system and the impact of different technologies to complement Social Science aspects while formulating the projects. Regarding OST/ OFTs, he advised to assess performance of different units and find out the best performed unit. He also stressed on the internal training requirement of the scientists. He also suggested including specific recommendations associated with projects in RCC slides

The meeting ended with Vote of Thanks to The Chair and all concerned.

Approved



Dr. Chirantan Chattopadhyay  
Chairman, RAC  
CSR&TI, Berhampore (CSB)  
Date: 19 Feb 2022

**LIST OF MEMBERS IN THE 54th MEETING OF RESEARCH ADVISORY COMMITTEE  
(RAC) HELD ON 21 & 22 Jan 2022**

#	NAMES	DESIGNATION
1	Dr. Chirantan Chattopadhyay	Chairman, RAC
2.	Dr. Somnath Bhattacharya	Professor, BCKV, Member
3.	Dr. R. Vardarajan	Professor, Manipur University, Member (Virtual)
4.	Dr. Debabrata Basu	Professor, B.C.K.V., Member
5.	Dr. Nirmal Kumar	Ex. Director, Member (Virtual)
6.	Dr. V. Sivaprasad	Director (Tech.), C.O.-Bangalore, Member (Leave)
7.	Sri Bikash Chandra Roy	Rearers Representative, Member
8.	Md. Salaudun Momin	Reelers Representative, Member (Leave)
9.	Smt. Dipika Sanyamath	Commissioner, Govt. of W.B., Member (Leave)
10.	Dr. N. Mura Singh Joint Dir.	DOS, Govt. of Tripura, Member (Virtual)
11.	Director	DoS, Manipur , Member (Leave)
12.	Dr. Kishor Kumar C.M.	Director, CSR&TI, Berhampore, Member Convenor
13.	Dr. Mandira Moorthi	Scientist-D, RCS, C.O.-Bangalore (Virtual)
14.	Dr. Manjunatha G.R.	Scientist-C, RCS, C.O.-Bangalore (Virtual)
15.	Dr. Palash Mondal	Assistant Professor, University of North Bengal (Virtual)
16.	Dr. Pranab Burma	SMS, KVK, (Virtual)
17.	Dr. Zakir Hossain	Scientist –D, RSRS, Kalimpong (Virtual)
18.	Dr. Dip Kumar Gogoi	Scientist –D, RSRS, Koraput (Virtual)
19.	Dr. Kumaresan	Scientist –D, RSRS, Jorhat (Virtual)
20.	Dr. Srinivasa G.	Scientist –D (SEEM), CSR&TI, Berhampore
21.	Dr. A. R. Pradeep	Scientist –D, CSR&TI, Berhampore
22.	Dr. Dipesh Pandit	Scientist –D (PMCE), CSR&TI, Berhampore
23.	Dr. Satadal Chakraborty	Scientist –D, CSR&TI, Berhampore
24.	Dr. Sukhabrata Sarkar	Scientist –D (Trg.), CSR&TI, Berhampore
25.	Dr. N. Chandrakanth	Scientist- C, CSR&TI, Berhampore
26.	Dr. Suresh K.	Scientist- C, CSR&TI, Berhampore
27.	Dr. Pooja Makwana	Scientist- C, CSR&TI, Berhampore
28.	Dr. Shafi Afroz	Scientist- C, CSR&TI, Berhampore
29.	Sri Pranesh Prasad	Deputy Director (Computer)
30.	Dr. Raviraj	Scientist- B, CSR&TI, Berhampore
31.	Dr. Parameshwar Naik	Scientist- B, CSR&TI, Berhampore
32.	Dr. Mihir Rabha	Scientist- B, CSR&TI, Berhampore
33.	Dr. Deepika Kumar Umesh	Scientist- B, CSR&TI, Berhampore
34.	Dr. Yallappa Harijon	Scientist- B, CSR&TI, Berhampore
35.	Dr. Ranjitha Devi	Scientist- B, CSR&TI, Berhampore
36.	Sri. Khasru Alam	Scientist- B, CSR&TI, Berhampore
37.	Dr. Harish Babu	Scientist- B, RSRS, Kalimpong (Leave)
38.	Miss Surabhi Ghosh	SRF, CSR&TI, Berhampore
39.	Miss Sougata Sarkar	JRF, CSR&TI, Berhampore
40.	Smt. Mahua Chattopadhyay	Sr. Tech. Asst.
41.	Sri Subrata Sarkar	Sr. Tech. Asst.
42.	Smt. Subhra Karmakar Mustafi	Sr. Tech. Asst.

*Meeting was arranged in dual mode (Physical & Virtual)*