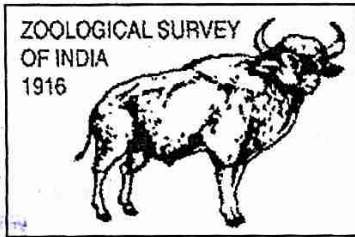




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THE UNIVERSITY OF BURDWAN

MEMORANDUM OF UNDERSTANDING  
FOR SCIENTIFIC AND ACADEMIC COOPERATION  
BETWEEN  
ZOOLOGICAL SURVEY OF INDIA  
AND  
THE UNIVERSITY OF BURDWAN, BURDWAN

Zoological Survey of India (ZSI), since its establishment on 1<sup>st</sup> July, 1916, has been pioneering on taxonomic research on animals, focusing on exploring, collecting, identifying, describing, classifying the animal taxa for inventorying, documentation and digitization of the Indian fauna. It has maintained its primary objectives of taxonomic research, survey and

डा. धृति बैनर्जी  
Dr. Dhriti Banerjee  
निदेशक / Director  
भारतीय प्राणि संरक्षण  
Zoological Survey of India  
प. व. एवं स. मंत्रालय, भारत सरकार  
MoEF&CC, Govt. of India  
कोलकाता / Kolkata-700053

Page 1 of 6

Sujit Kumar Chatterjee

REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104

Dhriti Banerjee

ক্রমিক নং 20564 তারিখ 19.6.23

ক্রেতা Sujit Chowdhury

সকিম BU BNN

ষ্ট্যাম্পের মূল্য 10/-

বর্ধমান টেক্সটাইল সনং ষ্ট্যাম্প বরাদ্দ তারিখ 15.6.23

ষ্ট্যাম্প ভেতর সঞ্জয় আচার্য

জেলা জজ আদালত (বর্ধমান)

সাইসেপ্স নং- ১/২০০৪-০৫

*Sanjay Acharya*

documentation of Indian fauna. The scope and functions of ZSI have been considerably expanded, particularly in the light of the Convention on Biological Diversity, ratified by the Govt. of India in 1994. To meet the challenges of biodiversity conservation, sustainable utilization and dissemination of knowledge on faunal diversity to all stake holders, ZSI acquired modern tools and techniques such as scanning electron microscopes, stereo zoom microscopes, GIS tools, Data basing tools and the DNA barcoding technology, augmenting the research infrastructure of ZSI.

The **University of Burdwan (BU)** with a motto *Learning Leads to Emancipations*, was established on 15th June, 1960, a premier university of eastern India. Since inception it has reached several milestones such as: university NIRF ranking is 86 (2023), and the university has been accredited with Grade 'A' by NAAC in the year 2016 and India Today rank for the year 2021 is 16.

Presently it has 22 Post-graduate departments of faculty of Arts & Humanities and 17 Post Graduate departments, faculty of Science. An engineering college, named as University Institute of Technology, has been established with the approval from All India Council for Technical Education (AICTE). Other Academic Depts: UGC-HRDC, SVARC, NSS, RTC, Sports Board, Life long Learning etc.

Academically, **The University Burdwan** has affiliated colleges: Burdwan district: 26; Hooghly district: 27 and Birbhum district: 19. Its territorial jurisdiction extends over three districts -Purba Burdwan, Hooghly, Birbhum. These constitute the greater part of Rarh Bengal, the cradle of ancient civilization of India. The university now offers courses on diverse disciplines. These include physical education, B.Ed., foreign languages, computer applications, population education, etc. There are also an Adult Continuing Education Center and the Academic Staff College. The university has a museum and art gallery at Rajbati that displays even the pottery of

*Dr. Dhriti Banerjee*

*Sujit Kumar Chowdhury*

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Dr. Dhriti Banerjee  
निदेशक / Director  
भारतीय प्राणि संरक्षण  
Zoological Survey of India  
प.व.एच.ब.प. भंगालय, भारत सरकार  
MoEF&CC, Govt. of India  
कोलकाता / Kolkata-700063

REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104

prehistoric age. The university has its Distance Education wing imparting Post-graduate education in different subjects as well as in some professional courses at Under-graduate level.

With social responsibilities in mind, the university actively patronized the construction of a Science Centre and a Planetarium, named as Meghnad Saha Planetarium. The University has established a Rural Technology Centre to impart vocational training and to create scope of self-employment for the rural youth.

The **Zoological Survey of India** and **The University of Burdwan**, Burdwan, agree that for encouragement and development of cooperation and exchange in areas of mutual academic interest, it is desirable to enhance research and academic processes at both ZSI and the **University of Burdwan** to strengthen mutual understanding between their respective staff, scholars and students. **The Zoological Survey of India**, represented by the **Director, ZSI** and **The University of Burdwan, Burdwan**, represented by the **Vice Chancellor, The University of Burdwan, Burdwan**, hereby, enter into an agreement for academic and educational cooperation and have set forth the following Articles of Mutual Agreement:

#### Article 1

The **University of Burdwan, Burdwan** and the **Zoological Survey of India** agree on, but is not limited to, the following based on their academic and educational needs:

1. For collaborative research work with the **Zoological Survey of India (ZSI)** or the students intending to pursue research works at ZSI, enrolment to Ph.D programme under the University of Burdwan (BU) will be carried out through the Common Research Eligibility Test (RET) conducted by the BU only.

  
डॉ. धृति बैनर्जी  
Dr. Dhriti Banerjee  
निदेशक / Director  
भारतीय प्राणि सर्वेक्षण  
Zoological Survey of India  
प.व.एन.स.प. मंत्रालय, भारत सरकार  
MoEF&CC, Govt. of India  
कोलकाता / Kolkata-700053



REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104

2. The bonafide students and research scholars of both the Institutions will have access to research facilities at **The University of Burdwan**, Burdwan and **Zoological Survey of India**.
3. The scientists of **Zoological Survey of India** conducting research shall be recognised as **Supervisors/Co-supervisors** for Doctoral under **The University of Burdwan**, as per the extant Ph.D regulations of the BU and UGC as adopted by the BU to be amended time to time.
4. In the research publications published from the thesis work of the candidate registered with the **University of Burdwan**, the affiliation of the concerned student should appear as **The University of Burdwan** and **Zoological Survey of India**.
5. Joint Research activities, developing research projects, funding, organising and participating in conferences, academic meetings, courses, seminars, symposia and lectures will be undertaken with due acknowledgement to both institutions.
6. Exchange of biological materials will be subjected to provisions under the Biodiversity Act (2002) and or any other such legal bindings by the Govt. of India.
7. Under this agreement, there will be no financial liability on **The University of Burdwan** or on the **Zoological Survey of India** from either side.

## Article 2

The exchange programmes and/or projects are not intended to be legally binding documents. They are meant to describe the nature and suggest the guidelines of the programme or project. Nothing, therefore, shall diminish the full autonomy of either university/ institution, nor will any constraint be imposed by either upon the other carrying out the agreement.

*Dr. Dhriti Banerjee*  
डा. धृति बैनर्जी  
Dr. Dhriti Banerjee  
निदेशक / Director  
भारतीय प्राणि संरक्षण  
Zoological Survey of India  
प.व.एच.ब. प. मंत्रालय, भारत सरकार  
MoEF&CC. Govt. of India  
कोलकाता / Kolkata-700053

*Sujit Kumar Chandra*

REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104

### Article 3

In order to carry out and fulfil the goals of this agreement both **The University of Burdwan** and **Zoological Survey of India** shall designate a programme coordinator to develop and co-ordinate the specific programmes and projects agreed upon. The programme coordinators will be responsible for the evaluation of activities under this agreement. Letters of agreement will be approved by both sides according to the normal procedures adopted by the signatory parties.

### Article 4

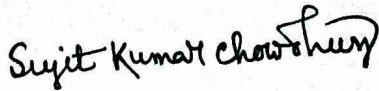
This MoU will come into force upon affixing of the signatures of the representatives of the both organizations and will remain in effect for five (5) years. This MoU will be renewed upon its expiry, as per mutual agreement of both organizations. If either organization wishes to terminate the MoU at the end of the five years period or in between the period of five years, it must notify the other organization not less than six months prior to the expiry of the MoU. The event of termination will not affect participants from completing their activities at the host institution already initiated or ongoing unless otherwise mutually agreed. Modifications to MoU will be made by mutual consent and any amendment or extension to the MoU will be formalized by the exchange of letters and or emails between the two institutions.

### Article 5

In the event of any unforeseen issues or matters not covered herein or any controversy, dispute or difference arising out of or in connection with this MoU, the same shall be resolved amicably by both the organizations. This MoU and further agreements will in all respect be governed by and construed in accordance with the laws of Govt. of India. This MoU shall be signed in counterpart. Each counterpart will constitute an original document

Page 5 of 6

  
डॉ. धृति बैनर्जी  
Dr. Dhriti Banerjee  
निदेशक / Director  
भारतीय प्राणि संरक्षण  
Zoological Survey of India  
प.व.एल.ब.प. मंत्रालय, भारत सरकार  
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कोलकाता / Kolkata-700053





and these counterparts taken together, shall constitute *one and the same* MoU.

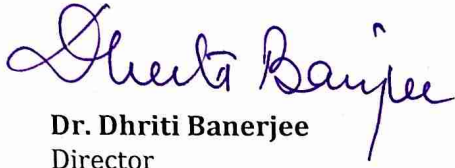
As witness to their consent to this agreement, the *appropriate authorities* here unto provide their signatures.

For the Zoological Survey of India, Kolkata, India

For The University of Burdwan, Burdwan, India

Director (as the case may be)

Registrar (as the case may be)



Dr. Dhriti Banerjee  
Director  
Zoological Survey of India  
Kolkata

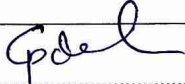
डॉ. धृति बैनर्जी  
Date: ~~Dr. Dhriti Banerjee~~  
निदेशक / Director  
भारतीय प्राणि संरक्षण  
Zoological Survey of India  
प.व. एवं ज. प. मंत्रालय, भारत सरकार  
MoEF&CC, Govt. of India  
कोलकाता / Kolkata-700053



Dr. Sujit Kumar Choudhury  
Registrar  
The University of Burdwan  
Burdwan

Date: 01.07.2023

REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104

Witness 1: 

DR. GURUPADA MANDAL  
SCIENTIST - 'E' M.Sc., Ph.D  
GOVT. OF INDIA  
MINISTRY OF ENV. FORESTS & CLIMATE CHANGE  
ZOOLOGICAL SURVEY OF INDIA  
M - BLOCK, NEW ALIPORE, KOL - 53

Witness 2: 

Dr. Ananta Naskar  
Scientist 'C'  
Zoological Survey of India  
Ministry of Environment, Forest  
& Climate Change  
Kolkata - 700053

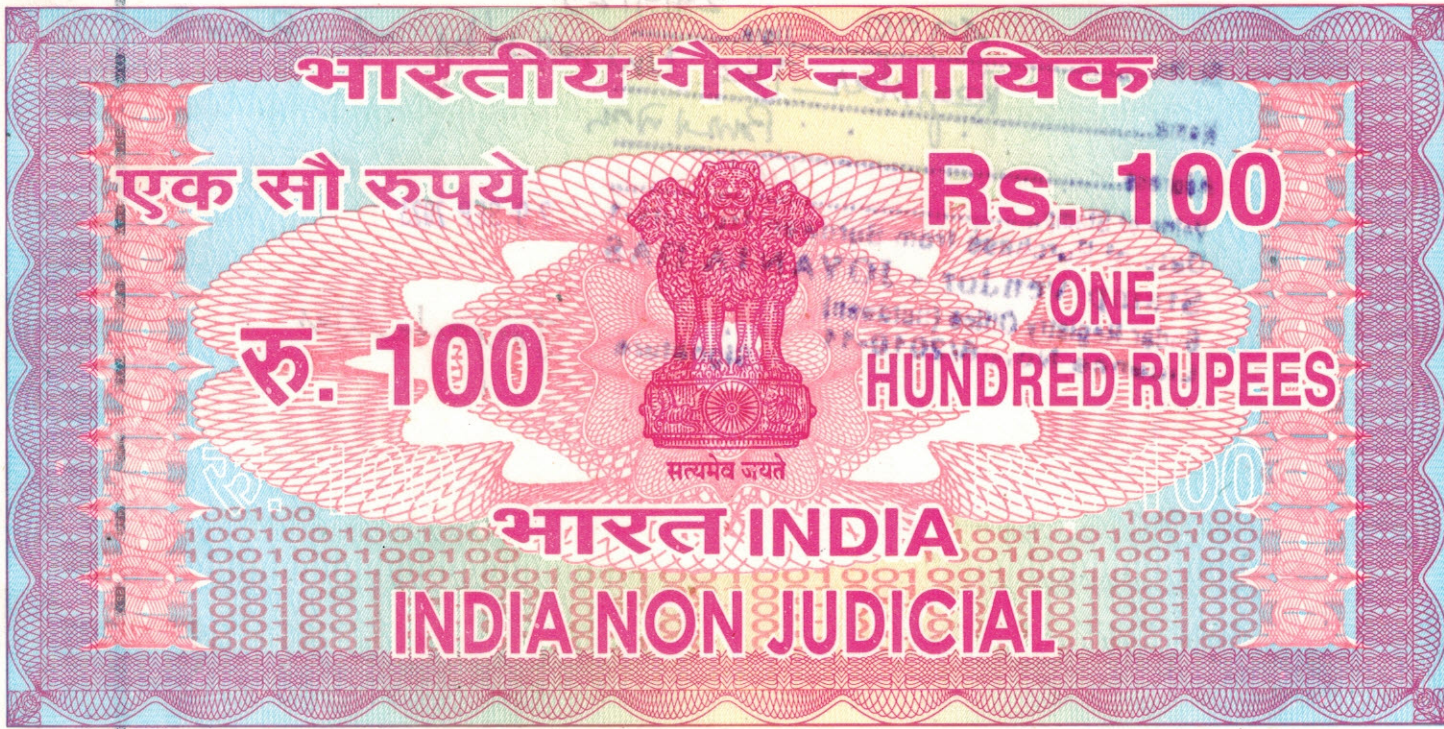
Witness 1: 

Dr. SANJOY PODDER  
Professor & Head  
Department of Zoology  
The University of Burdwan  
Golapbag, Burdwan-713104

Witness 2: 

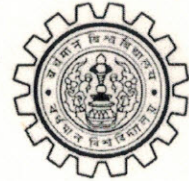
Dr. A. Mazumdar  
Professor  
Department of Zoology  
The University of Burdwan  
Burdwan-713104, W.B., India





पश्चिमबङ्ग पश्चिम बंगाल WEST BENGAL

AN 480022



**Memorandum of Understanding (MoU)**  
between  
**CSIR-National Physical Laboratory (CSIR-NPL)**  
and  
**The University of Burdwan (BU)**

**AGREEMENT between CSIR-National Physical Laboratory, New Delhi, India  
and The University of Burdwan,  
West Bengal, India, India**

**L.1 THE AGREEMENT**

**L.1.1 THIS AGREEMENT made and entered into on this 5th day of October 2023 between the COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH (CSIR), a Society registered under the Societies Registration Act (XXI of 1860),**



having its registered office at Anusandhan Bhawan, 2, Rafi Marg, New Delhi – 110001 through its one of the constituent laboratories, **CSIR-NATIONAL PHYSICAL LABORATORY**, Dr. K.S. Krishnan Road, New Delhi (India) (hereinafter called **CSIR-NPL** which expression shall wherever the context so admits include its successors and permitted assigns) of the first Party.

&

**L.1.2 THE UNIVERSITY OF BURDWAN**, 'Grade A' University accredited by NAAC with its location at Rajbati, Bardhaman, West Bengal - 713104 (hereinafter called the Burdwan University or **BU** which expression shall where the context so admits include its successors and permitted assigns) of the other part.

## **L.2 PREAMBLE:**

**L.2.1 WHEREAS**, **CSIR-NPL** is mandated to be India's "National Measurement Institute" (NMI) by the act of Parliament and its associated rules for legal metrology. **CSIR-NPL** is the custodian of "National Standards" with a responsibility of realization, establishment, upgradation, maintenance, and dissemination of standards at par to international level. **CSIR-NPL** is serving the Indian industry, academia, and strategic sectors to excel in their endeavours by providing APEX level testing and calibration facilities.

**L.2.2 WHEREAS**, The University of Burdwan is engaged in R&D activities on GNSS basically focused on study of NavIC, exploring cost-effective and compact GNSS modules, development of low-cost GNSS Modules for positioning, timing, and ionospheric probing.

**AND WHEREAS**, **CSIR-NPL** being the NMI of India has capability to provide traceability to SI units. **CSIR-NPL** intends to collaborate with The University of Burdwan for joint work under which exchange of students will be selected by mutual agreement between the home institution and the host institution. Furthermore, information sharing on research and educational programs, sharing of teaching/learning materials and other literature and scientific equipment relevant to their educational and research programs would be made on mutual agreement during the tenure of MoU.

## **L.3 SCOPE OF AGREEMENT**

**L.3.1** Short and Long-term Scientists /Faculty Exchange

**L.3.2** Training of all students and faculty will be as per the HRD norms of the respective institutes.

**L.3.3** Collaborative research will be carried out under the outreach programme of the respective institutes.



- L.3.4** Current proposal for the mutual collaboration includes Global Navigation Satellite System (GNSS) and NavIC based Positioning & Timing applications.
- L.3.5** Other mutually agreed educational or research or field programs (rural development programs, material science research, Metrology of various physical parameters etc.,) will be formulated by a joint committee from either party.
- L.3.5** Joint project proposals to R&D funding agencies will be with clear mention of separate budget distribution.

#### **L.4 FINANCIAL ARRANGEMENTS**

**L.4.1** Activity Agreements should make financial costs and obligations explicit. Collaborating units are encouraged to work together to identify and secure any outside funding which may be needed. Projects requiring funding must be approved by both institutions.

##### **i) Lumpsum**

- a. Training charges as per HRD.

**ii) Royalty:** The royalty will be on case-to-case basis if required for Technology transfer.

#### **L.5 MODALITIES**

**L.5.1** In consideration of financial arrangements as provided in clause L.4, CSIR-NPL hereby agrees to provide continuous services to **The University of Burdwan** for SI traceability and for the period of this agreement.

**L.5.2** The AGREEMENT shall come into force from date of the signing of the AGREEMENT (herein after called the effective date) and shall remain valid till further joint meeting.

#### **L.6 MUTUAL RESPONSIBILITIES**

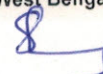
**L.6.1** Short and Long-term Scientists/Faculty Exchange.

**L.6.2** Training of all students and faculty will be as per the HRD norms of the respective institutes.

**L.6.3** Collaborative research will be carried out under the outreach programme of the respective institutes.

**L.6.4** Other mutually agreed educational or research or field programs (popularization of metrology, rural development programs, scientific social responsibility etc.,) will be formulated by a joint committee from either party.

**L.6.5** Joint project proposals to R&D funding agencies will clear mention of separate budget distribution.



(Before implementing these activities, the parties will discuss the opportunities and challenges presented and will thereafter enter into specific activity agreements based on the mutually agreed objectives and outcomes.)

### **CSIR NPL Responsibility**

CSIR-NPL reserves the right to perform a separate risk assessment on the legal, tax and other liabilities that may arise under each Activity Agreement and to structure its deliverables under the Activity Agreement in a way that maximizes the cost and liability efficiencies for CSIR-NPL.

We at CSIR-NPL will define what is Activity Agreement: Like for example, for people called in and out for very specific purpose (talks, committee meetings, assessment reports, etc etc) will be completely hosted by the hosting Univ./Instt etc

**L.7 CALENDAR OF EVENTS:** At the start of every year, for which the MoU is valid, a clear active plan may be defined for whole year.

### **L.8 GENERAL PROVISIONS**

**L.8.1** This AGREEMENT shall be the sole repository of the terms and conditions agreed to herein by the between CSIR-NPL and The University of Burdwan.

**L.8.2** Either Party to this AGREEMENT shall be entitled to request an amendment or modification to this AGREEMENT by submitting its request in writing to the other Party. If the other Party agrees to amend this AGREEMENT, the amendment shall take effect after it is signed by both Parties.

**L.8.3** Prior to the effectiveness of any such amendment, original terms and conditions of this AGREEMENT shall remain in full force and shall only be superseded after the signature of the amendment by both the Parties and then only to the extent specifically provided in such amendment.

**L.8.4** The Parties may cancel the AGREEMENT either wholly or in part by giving three (3) months written notice due to a breach of material conditions that were not cured or were impossible to cure.

**L.8.5** If necessary, AGREEMENT review process can be done yearly or as per 6.2 the frequency mutually decided.

**L.8.6** The University of Burdwan will not use the name or logo of CSIR or CSIR-NPL, nor of any member of **CSIR** or **CSIR-NPL's** program staff, in any publicity, advertising, or news release without the prior written approval of an authorized representative of **CSIR-NPL** will not use the name or logo of The University of Burdwan, or of its any employee of, in any publicity, advertising, or news release without the prior written approval of The University of Burdwan.



**L.8.7 Prevailing Language** - English version of this Memorandum of Understanding represents the understanding of both Parties. Any other language version is provided as a translation. In the event of any conflict between the two versions, the English version will prevail.

**L.8.8 Non-Binding** - This Agreement is non-binding and solely for the purpose of establishing a basis upon which the two parties will continue discussions. Either of the parties may at its sole discretion terminate discussions for any reason by giving written notice of termination to the other. In the case of a dispute that arises relating to any aspect of cooperation under this Agreement, the parties may attempt to resolve such dispute through friendly negotiation, or either party may elect to terminate the agreement pursuant to the previous provision. Upon termination, the parties will have no further obligations hereunder.

### **L.9 MANAGEMENT**

**L.9.1** An apex body with Director, CSIR-NPL, and **Prof. Venugopal Achanta** or its representative and **Registrar, The University of Burdwan** or his representative as members shall monitor the implementation of this AGREEMENT and provide decision on managerial and financial related matters.

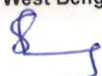
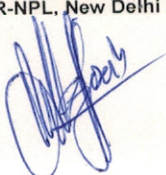
**L.9.2** A team appointed by Director, CSIR-NPL and **Registrar, The University of Burdwan** shall hold periodic discussions on scientific and technical matters and resolve issues, if any.

**L.9.3** Any unresolved issue shall be referred to the apex body.

### **L.10 FORCE MAJEURE**

**L.10.1** The purpose of this clause is to establish the consequences of FORCE MAJEURE events preventing either Party from complying with any of its responsibilities under this AGREEMENT.

**L.10.2** For the purpose of this Article, the term FORCE MAJEURE shall refer to unforeseen and irresistible events extrinsic to this AGREEMENT and which are beyond the reasonable control of the party such as wars, riots, serious floods typhoons and earthquake leading to the damage or destruction of the facilities required for the services. The term shall not include strikes or other events caused by labour disputes, unless such strikes or other events are part of national or regional disputes.



**L.10.3** The party affected by FORCE MAJEURE event shall send notification of this to the other party without undue delay and shall send to the other Party by registered / speed post mail within fourteen (14) days, a confirmation certificate issued by the authorities or departments concerned along with a detailed explanation.

**L.10.4** During the period of effect of the FORCE MAJEURE event, the execution of any services requirement agreed between the Parties under this AGREEMENT shall be suspended without damages for the Party affected by such a FORCE MAJEURE event.

**L.10.5** In case of a FORCE MAJEURE event, the parties agree to do their utmost to minimize the negative impact on the other party of the suspension, and each Party shall do its best to execute the service requirements already initiated.

**L.10.6** Should the FORCE MAJEURE event last for more than two (2) consecutive months, each Party shall have the option of terminating the AGREEMENT; the Party wishing to terminate this AGREEMENT shall notify the other Party of its intention in writing.

#### **L.11 ARBITRATION**

In case of any disputes or differences arising between the Parties in relation to this AGREEMENT, such disputes or differences shall be amicably settled by mutual discussions between the Parties at the level of their respective Executive Directors or such officials so authorized by the parties. Except as hereinbefore provided, all disputes arising out of or in connection with the AGREEMENT shall be referred to Delhi International Arbitration Centre, Delhi High Court, New Delhi. Arbitration proceedings shall be conducted in the English Language.

#### **L.12 CONFIDENTIALITY**

**L.12.1** Each Party shall have the responsibility to keep confidentiality of the techniques, technical documents and information obtained from the other Party. Both Parties shall not disclose any of them to any third party unless otherwise explicitly agreed by the Parties.

**L.12.2** Neither of the two Parties shall disclose the content of this AGREEMENT to any third party without the written permission of the other Party.



### L.13 ASSIGNMENT

**L.13.1** The rights and/or liabilities arising to any Party of this AGREEMENT shall not be assigned except with the written consent of the other Party and subject to such terms and conditions as may be mutually agreed upon.

**L.13.2** This AGREEMENT executed between CSIR-NPL and ~~Registrar~~, The University of Burdwan, at New Delhi on **5<sup>th</sup> October 2023**. IN WITNESS WHERE OF, the Parties hereto have entered and agreed to this AGREEMENT effective at as of the day and year first above written.

### SEAL OF PARTIES

In witness whereof the Parties hereto have signed this agreement on the day, month and year mentioned herein before:

<b>Signature :</b> 	<b>Signature:</b>  <b>REGISTRAR</b> <b>THE UNIVERSITY OF BURDWAN</b> <b>BURDWAN - 713104</b>
Name: Dr Jiji T J Pulikkotil Date : 05 October 2023 Position: <b>Head, HRD, CSIR-NPL, New Delhi</b> Affiliation & Seal: CSIR-NPL	Name: Dr Sujit Kumar Chowdhury Date : 05 October 2023 Position: <del>Registrar</del> , <b>The University of Burdwan</b> Affiliation & Seal:  The University of Burdwan
Signature (Witness 1) 	Signature (Witness 1)  <b>Professor &amp; Head</b> <b>Department of Physics</b> <b>The University of Burdwan</b> <b>Burdwan-713104</b>
Name: Dr Ashish Agarwal Date: 05 October 2023 Position: Sr. Pr. Scientist, CSIR-NPL	Name: Prof Atis Chandra Mondal Date: 05 October 2023 Position: Head, Department of Physics, BU
Signature (Witness 2) 	Signature (Witness 2) 
Name: Ms Preeti Kandpal Date: 05 October 2023 Position: Scientist, CSIR-NPL	Name: Dr Anindya Bose Date: 05 October 2023 Position: Senior Scientific Officer, BU



**Key Contacts at CSIR-NPL New Delhi:**

<b>Name</b>	<b>Organisation</b>	<b>Role</b>	<b>Telephone</b>	<b>Email</b>
Dr. Venugopal Achanta	CSIR-NPL	Director	45609301/ 45609302	dnpl@nplindia.org
Dr. Ashish Agarwal	CSIR-NPL	Sr. Pr. Scientist	45608384, 45608525	ashish@nplindia.org

**Key Contacts at The University of Burdwan:**

<b>Name</b>	<b>Organisation</b>	<b>Role</b>	<b>Telephone</b>	<b>Email</b>
Prof S Karforma	BU, West Bengal	Dean, Faculty of Science University of Burdwan	9474553590/ 7384456418	dean_science@buruniv.ac.in
Prof A C Mondal	BU, West Bengal	HoD, Physics Department University of Burdwan	7001399026	hod@phys.buruniv.ac.in

